

MANUFACTURERS' RECORD

A WEEKLY SOUTHERN INDUSTRIAL
RAILROAD AND FINANCIAL NEWSPAPER.

CONTENTS.

EDITORIAL.

An Unauthorized Claim of Endorsement	5
Restrain the Mississippi	5
Southern-Made Railroad Material	5
Sales of Town Lots	6
The South on an Enduring Basis	6
A Premature Boom	7
Developer Versus Boomer	7
No Objection to Honest Criticism	36

INDUSTRIAL NOTES.

Trade Notes	52, 65
Illustrated Descriptions of Machinery	47, 55, 65, 71
Iron Market Report	66
Eastern Lumber Markets	70

RAILROAD DEPARTMENT.

Baltimore Sells Its B. & O. Stock	35
Other Railroad Notes	35
Railroad Construction	35

FINANCIAL DEPARTMENT.

New Banks	36
Bonds, Stocks and Other Notes	36

CORRESPONDENCE AND NOTES.

Lynchburg's Future	7
General Notes	8
Where Factories Pay—Prospects at Staunton, Va.	9
The Cardiff Company's Building	9
Iron and Steel for Architectural Work	9
San Antonio as a Health Resort	9
Virginia's Valley and Basic City	10
Dallas Organized to Aid Manufacturers	11
Austinville, Va., and Its Lead and Zinc Mines	11
Kimball's Big Sale	36
A Big Enterprise at Crawfish Springs, Tenn.	41
Kimball, and What is Doing There	41
The Virginia Development Co.	42

CONSTRUCTION DEPARTMENT.

Full particulars regarding all industrial enterprises organized in the South during the past week	38-40
Burned	40
Building Notes	40, 41
Machinery Wanted	42

VOL. XVII
No. 19.

\$4.00 per year.
Single Copy
10 Cents.

Baltimore, June 14, 1890.

Classified Index of Advertisers.

[FOR ALPHABETICAL INDEX WITH PAGES, SEE PAGE 81.]

- Air Compressors.**
Ingersoll-Sergeant Rock Drill Co.
Rand Drill Co.
- Architects.**
Gray & Fitch.
Raeder, Coffin & Crocker
C. R. Makepeace & Co.
Lockwood, Greene & Co.
Drew, Baldwin & Co.
- Architectural Iron Work.**
Chickasaw Iron Works.
Manly Mfg. Co.
- Bankers & Brokers.**
Alex. Brown & Sons.
N. W. Harris & Co.
Jno. D. McFarland.
Wilson, Colston & Co.
Jno. L. Williams & Son.
Middendorf, Oliver & Co.
Southern Investment Co.
Frederic Taylor & Co.
P. J. Goodhart & Co.
Equitable Mortgage Co.
- Barrel Machinery**
(See Wood-Working Machinery.)
- E. & B. Holmes.**
- Bath Tubs.**
Haines, Jones & Cadbury Co.
- Bearings.**
North American Metal-ine Co.
- Bells.**
Henry McShane & Co.
- Belting.**
Baker, Sloo & Co.
Chesapeake Belting Co.
Nashville Rapid Tann'g & Belt Mfg. Co.
Gandy Belting Co.
Chicago Rawh. Mfg. Co.
Page Belting Co.
Shultz Belting Co.
- Belting (Chain.)**
F. H. C. Mey.
Jeffrey Mfg. Co.
Link Belt Engineer'g Co.
Belt Holders.
W. R. Santley & Co.
Blacksmiths' Tools.
- Blinds.**
Hartman & Dursline.
Wm. Willer.
- Blocks (Tackle) & Sheaves.**
Boston & Lockport Block Co.
Fulton Iron & Eng. Wks.
Western Block Co.
- Blowers and Exhaust Fans.**
Akron Heat & Ven. Co.
Buffalo Forge Co.
B. F. Sturtevant.
Wakefield Mfg. Co.
- Boat Builders.**
Lockwood Mfg. Co.
- Boiler Fronts and Fittings.**
Vulcan Iron Works Co.
- Boilers.**
(See also Machinery.)
Talbot & Sons.
Armstrong Bros.
Rice & Whitacre Mfg. Co.
Chickasaw Iron Works.
Porter Mfg. Co., Lim.
Atlanta Machine Wks.
Heine Safety Boiler Co.
Tudor Boiler Mfg. Co.
Vaik & Murdoch I. Wks.
Ed. Kendall & Sons.
Casey & Co.
Babcock & Wilcox Co.
Hewes & Phillips Iron Works.
Frick Co.
Harrison Stry. B'l'r. Wks.
R. Munroe & Son.
Rochester Machine Tool Wks.
Geo. W. Tift, Sons & Co.
Cleveland & Hardwick
Lowell Stry. Boiler Wks.
Campbell & Zell Co.
Taylor Mfg. Co.
Webster, Camp & Lane Machine Co.
E. J. Wood.
- Boiler Appliances.**
Wm. Baragwanath & Son.
Janney & Wickersham.
Austin Adams.
Geo. A. Barnard.
Curtis Regulator Co.
Reliance Gauge Co.
Stilwell & Bierce Mfg. Co.
Mason Regulator Co.
Hopes Mfg. Co.
Boiler Compound.
Litofuge Mfg. Co.
- Boiler Makers' Supplies.**
New Doty Mfg. Co.
- Boiler Setting.**
Jarvis Engineering Co.
Bolts, Rivets and Nuts.
Hoopes & Townsend.
Bricks.
Washington Hydraulic Press Brick Co.
- Brick & Clay Working Machinery & Supplies.**
Stevenson & Co.
J. W. Penfield & Son.
D. J. C. Arnold.
Nolan, Madden & Co.
- Bridges.**
Pittsburgh Bridge Co.
Potomac Bridge Works.
- Brushes.**
Jno. L. Whiting & Son.
- Business Opportunities.**
W. Lynchburg Land Co.
R. H. Whitney & Co.
Wess & Salvage.
M. H. V. Jones.
Murray & Stevenson.
Caldwell P't'n'g Wks.
Chas. G. Eddy.
- Canning Machinery.**
Cleveland Gas Mach. Co.
Nieg, Stamp'g & T'l Co.
Warfield Mfg. Co.
- Card Clothing.**
(See Textile Machinery and Supplies.)
- Cars.**
(See R. R. Equipment and Supplies.)
- Castings.**
A. Whitney & Sons.
Knoxville Car Whl. Co.
Chester Steel Cast'g Co.
- Cast'gs (Brass, &c.)**
Thos. J. Delany & Co.
- Car Wheels.**
Knoxville Car Whl. Co.
A. Whitney & Sons.
Russell Whl. & Found Co.
- Car Works Equipment.**
Geo. Place.
- Chemist.**
Otten & Westenhoff.
J. H. Pratt.
Stein & Schwarz.
- Cloth Folders.**
W. A. Richardson & Co.
- Clutches (Fric't'n.)**
Hill Clutch Works.
The Moore & White Co.
Eclipse Wind Eng. Co.
- Construction Companies.**
Southern Ry. Con. Co.
Miller & Bierce.
Simpkin & Hillier.
- Contractors' Supplies.**
Contr't's Plant Mfg. Co.
Kilbourn & Jacobs Mfg. Co.
Ryan-McDonald Mfg. Co.
Stuebner & Woods.
- Contracting Engineers and Machinists.**
American Pipe Mfg. Co.
Stein & Schwarz.
Wright & Wood.
Nier, Hart'g & Mitchell.
Porter Mfg. Co., Lim.
Miller & Bierce.
Simpkin & Hillier.
Jas. P. Witherow.
E. J. Wood.
- Conveyors.**
Webster & Comstock Mfg. Co.
F. H. C. Mey.
W. J. Clark & Co.
H. W. Caldwell & Son.
McLanahan & Stone.
The Jeffrey Mfg. Co.
Link Belt Engineer'g Co.
Corrugated Iron.
Canton Steel Roof'g Co.
Cincinnati Corrug. Co.
Globe Iron Roofing & Corrugating Co.
Holton Iron Roof'g Co.
Kanneberg Roofing Co.
Cambridge Roofing Co.
Wheeling Corru'g Co.
Cot'n Compresses.
Campbell Cot. Com. Co.
Miller & Bierce.
- Cotton Gins.**
Talbot & Sons.
Van Winkle Gin & Mach. Co.
- Cotton Seed Oil Machinery.**
Chickasaw Iron Works.
H. W. Hubbard.
G. H. Bushnell & Co.
Van Winkle Gin & Mach. Co.
Talbot & Sons.
Cardwell Machine Co.
W. P. Callahan & Co.
- Cranes.**
Vulcan Iron Wks. Co.
Detroit Fdy. Equip. Co.
Phoenix Iron Works.
Walker Mfg. Co.
- Crushers (Corn and Cob.)**
Waldron & Sprout.
- Crushers (Ore, Stone, &c.)**
Frisbee-Lucop Mill Co.
Lloyd-Booth Co.
Bradley Fertilizer Co.
Gates Iron Works.
F. H. Moore.
James Murray & Son.
Wiswell Electric Mining Machinery Co.
Stedman's F. & M. Wks.
- Dairy Supplies.**
John S. Carter.
R. M. Johnson.
Powell & Lockwood.
H. McK. Wilson & Co.
- Derricks.**
Contractors' Plant Mfg. Co.
Simmerly Derrick Co.
- Dredges & Steam Shovels.**
Copeland & Bacon.
Vulcan Iron Works Co.
Drills (Prospect'g)
Diamond Prospect'g Co.
M. C. Bullock Mfg. Co.
Rock Drill Co.
Drills (Rock).
M. C. Bullock Mfg. Co.
Diamond Prospect'g Co.
Ingersoll-Sergeant Rock Drill Co.
Drills (Wood and Metal).
W. F. & Jno. Barnes Co.
Cleveland Twist Drill Co.
Lodge & Davis Machine Tool Co.
Bickford Drill Co.
Dry Kilns.
Standard Dry Kiln Co.
B. F. Sturtevant.
Akron Heat & Ven. Co.
Electric Lighting.
Mather Electric Co.
Brush Electric Co.
Thomson-Houston Electric Co.
Helsler Elec. Light Co.
Southern Electrical Supply Co.
United Edison Mfg. Co.
Electric Railway and Motors.
Thomson-Houston Electric Co.
Brush Electric Light Co.
Electrical Engineers.
C. S. Van Nuis.
D. C. Giles.
- Electrical Supplies.**
United Edison Mfg. Co.
Southern Electrical Supply Co.
- Elevators.**
Salem Fdy. & Mch. Shop
James Bates.
Jeffrey Mfg. Co.
Morse, Williams & Co.
Sulzer-Vogt Mch. Co.
Emery Wheels.
(See Grinding and Polishing Machinery.)
- Enamel.**
Nubian Iron Enamel Co.
- Engines.**
(See also Machinery.)
Rice & Whitacre Mfg. Co.
Armstrong Bros.
Chickasaw Iron Works.
Skinner Engine Co.
Talbot & Sons.
Lockwood Mfg. Co.
Porter Mfg. Co., Lim.
Chandler & Taylor.
Frick Co.
Hewes & Phillips Iron Works.
Casey & Co.
Vaik & Murdoch I. Wks.
W. A. Harris St. En. Co.
Geo. W. Tift, Sons & Co.
The J. T. Nove Mfg. Co.
Rochester Mch. Tool Wks.
- Engines (Gas).**
Charter Gas Engine Co.
Otto Gas Engine Wks.
Van Duzen Gas & Gasoline Engine Co.
- Engines (Kerosene).**
Rochester Machine Tool Works.
- Engravers.**
J. A. J. Wilcox.
Ryder & Dearth.
- Feed Wat'r Heater.**
Wm. Baragwanath & Son.
Hopes Mfg. Co.
- Fencing.**
Manly Mfg. Co.
Dufur & Co.
Fred J. Meyers Mfg. Co.
Ludlow Saylor Wire Co.
- Fertilizer Machinery.**
Vaik & Murdoch I. Wks.
W. D. Dunning.
- Files.**
Industry File Works.
Nicholson File Co.
Henry Distant & Sons.
Webster File Works.
Western File Co.
- Flour & Grist Mill Machinery and Supplies.**
Nordyke & Marmon Co.
Talbot & Sons.
Richmond City Mill Works.
Case Mfg. Co.
Chas. E. Manor.
F. F. Starr & Co.
H. W. Caldwell & Son.
Rome Found. & Mch. Co.
Waldron & Sprout.
Geo. J. Fritz.
- Foot-Power Machinery.**
W. F. & Jno. Barnes Co.
H. L. Shepard.
Sebastian-Mar Co.
- Force Pumps.**
Mast, Feos & Co.
Superior Machine Co.
- Forges.**
Buffalo Forge Co.
B. F. Sturtevant.
Becher & Peck.
Bradley & Co.
Empire Port. Forge Co.
- Foundry Machinery.**
Detroit Fdy. Equip. Co.
Byram & Co.
Allentown F. & Mch. Co.
Victor Colliau.
Knoxville Car Whl. Co.
Jas. P. Witherow.
- Friction Cones.**
Evans Frict'n Cone Co.
- Fruit Evaporators.**
American Mfg. Co.
- Furnace Builders.**
Gordon, Strobel & Laurens.
Jas. P. Witherow.
Stein & Schwarz.
- Furnace for Boilers.**
Foundry & Mch. Depart.
Harris'g Car Mfg. Co.
Jarvis Engineering Co.
- Furnace Supplies.**
Byram & Co.
Lowe & Tucker.
Grant McNeil.
- Gas Machines and Appliances.**
Cleveland Gas Mch. Co.
Detroit Heat'g & Lighting Co.
American Gas Sav'g Co.
Penna. Globe Gas Light Co.
- Gauge Glass.**
Pancoast & Maule.
- Grain Elevator Supplies.**
H. W. Caldwell & Son.
- Grate Bars.**
N. E. Roller Grates.
- Grinding and Polishing Machinery.**
Springfield Em'y Wheel Mfg. Co.
Waltham Emery Wl. Co.
Northampton Emery Wheel Co.
Norton Emery Wheel Co.
- Hammers, (Steam and Power).**
Long & Allstatte Co.
Belden Machine Co.
Bradley & Co.
Southwark F. & M. Co.
Knoxville Car Whl. Co.
- Handle Machinery.**
(See Wood-working Machinery.)
- Hardware Specialties.**
American Screw Co.
Belden Mch. Co.
Heesen Bros. & Co.
Empire Port. Forge Co.
Fred J. Meyers Mfg. Co.
Van Wagoner & Williams Co.
Cronk Hanger Co.
Wier & Wilson.
Covert Mfg. Co.
- Heating Apparatus.**
Akron Htg. & Ven. Co.
Detroit Heat'g & Lighting Co.
D. F. Morgan Boiler Co.
B. F. Sturtevant.
- Holating Machinery.**
Rice & Whitacre Mfg. Co.
Jno. F. Byers.
Morris Co. Mch. Co.
M. C. Bullock Mfg. Co.
Copeland & Bacon.
Ed. Kendall & Sons.
Diamond Prospect. Co.
Knoxville Car Whl. Co.
Vulcan Iron Works Co.
Ryan-McDonald Mfg. Co.
Webster, Camp & Lane Machine Co.
- Chain Hoist.**
E. Harrington, Son & Co.
Boston & Lockport Block Co.
- Rope Hoist.**
Fulton Iron & En. Wks.
Palmer, Cunningham & Co., Limited.
- Hose.**
Waterbury Rubber Co.
- Hydrants.**
Ludlow Valve Mfg. Co.
- Hydraulic Machinery.**
Watson & Stillman.
- Ice-Making Machinery.**
Atlanta Machine Wks.
Castle Engine Works.
Consolidated Ice Mch. Co.
Ring Ref. & Ice Mch. Co.
Hercules Iron Works.
Richmond Ice Mch. Co.
Sulzer-Vogt Mch. Co.
Frick Co.
Arctic Ice Mch. Mfg. Co.
- Injectors.**
Forest City Brass Wks.
Sherwood Mfg. Co.
- Insulated Wires & Cables.**
Southern Electrical Supply Co.
- Insurance.**
Empire's Liability Assurance Corp'n, Lim.
Hartford St. Boiler Insp. and Insurance Co.
- Iron Working Machinery.**
Stow Flexible Shaft Co., Limited.
Niles Tool Works.
E. Harrington, Son & Co.
Lodge & Davis Machine Tool Co.
Lathe & Morse Tool Co.
Globe Machine Co.
- Jacks.**
Joyce, Cridland & Co.
Rieble Bros.
- Jacks (Hydraulic).**
Watson & Stillman.
- Laundry Machinery.**
Geo. J. Fritz.
- The A. M. Dolph Co.**
- Lights (Factory and Outdoor).**
Keegan & Halpin.
Industrial Light Co.
Penna. Globe Gas Light Co.
- Locomotives.**
(See also R. R. Equipment and Supplies.)
Chickasaw Iron Works.
Richmond Loc. & Mch. Wks.
H. K. Porter & Co.
Baldwin Loc. Works.
- Lubricants.**
Olney Bros.
- Lumber.**
E. B. Hunting & Co.
Johnson, Shryock & Co.
Thos. J. Shryock & Co.
- Machinery.**
Allentown F. & Mch. Co.
W. D. Dunning.
Blymer Iron Wks. Co.
G. H. Bushnell Co.
Lockwood Mfg. Co.
Box 110, Cleveland, O.
Becher & Peck.
Nicholson & Waterman Mfg. Co.
Thos. K. Carey & Bros.
Christiana Mch. Co.
Thaddeus S. Cobb & Co.
Webster & Comstock Mfg. Co.
- Southern Equipment Co.**
- M. C. Bullock Mfg. Co.**
- Hill Clutch Works.**
- Knoxville Car Whl. Co.**
- Rome Fdy. & Mch. Wks.**
- Birdsall Co.**
- S. C. Forsyth Mch. Co.**
- R. M. Johnson.**
- Warfield Mfg. Co.**
- F. A. Estep.**
- Stow Flexible Shaft Co., Limited.**
- Found. & Mch. Depart. of Harris'g Car Mfg. Co.**
- Morris Machine Wks.**
- Richmond Loc. & Mch. Wks.**
- Alex. K. Rarig & Co.**
- Lowell Stry. Boiler Wks.**
- McLanahan & Stone.**
- Vulcan Iron Works Co.**
- Machinery & Tools (Second Hand).**
J. A. Mackinnon Mfg. Co.
N. Y. Machinery Depot
Prentiss Tool & Sup. Co.
F. L. Seyfert.
S. C. Forsyth Mch. Co.
Lowell Stry. Boiler Wks.
G. H. Scanlan & Co.
- Mill Engineers.**
Gray & Fitch.
Raeder, Coffin & Crocker
Lockwood, Greene & Co.
C. R. Makepeace & Co.
Drew, Baldwin & Co.
- Mill Stones.**
B. F. Starr & Co.
- Mill Supplies.**
Talbot & Sons.
Waters & Garland.
Milner & Kettig.
Thos. K. Carey & Bros.
James Smith & Co.
- Mining, Quarrying & Stone-Cutting Machinery.**
Steam Stone Cutter Co.
Allentown F. & Mch. Co.
Atlanta Machine Wks.
Ingersoll-Sergeant Rock Drill Co.
Morris Co. Mch. Co.
Gates Iron Works.
Diamond Prospect'g Co.
Wiswell Electric Mini'g Machinery Co.
M. C. Bullock Mfg. Co.
Copeland & Bacon.
Rand Drill Co.
Jeffrey Mfg. Co.
Webster Camp & Lane Machine Co.
Lincoln Iron Works.
Miscellaneous.
Corporation Book Co.
Detroit & Cleveland Steam Navigation Co.
J. E. Palmer Co.
Nat. Typewriter Co.
Miller Safe & Iron Wks.
R. M. Whitney.
Chamberlin Mfg. Co.
Jory & Co.
A. B. Collier.
- Frederick H. Smith.**
S. E. Crawford.
Chas. J. Beattie.
Cleveland Axle Mfg. Co.
Pickands, Mather & Co.
E. DeF. Shelton.
Bundy Mfg. Co.
Terry Mfg. Co.
American Pig Iron Storage Warehouse Co.
Phila. Warehouse Co.
Eastman & Co.
Ryder & Dearth.
C. A. Gambrill Mfg. Co.
Elias Edmonds.
The Bradstreet Co.
Ligowsky Clay Pig'n Co.
Bernhard Diets.
Budden & Son.
John Ryan Co.
Ault & Wiborg.
Record Printing House.
Edw. Allen.
Stillman, (Cleveland.)
Niagara, (Buffalo.)
Hotel Lucerne, (Salem.)
- Office Furniture.**
Frank Rhoner & Co.
Derby & Kilmer Dk. Co.
Terry Mfg. Co.
- Oil Caps.**
Sherwood Mfg. Co.
- Olney Bros.**
Wm. C. Robinson & Son.
- Ore Washers.**
McLanahan & Stone.
- Packing.**
James Smith & Co.
Shields & Brown Co.
Page Belting Co.
Jenkins Bros.
- Paint.**
A. F. Bonton & Co.
H. W. Johns Mfg. Co.
Ironclad Paint Co.
Jos. Dixon Crucible Co.
Chattanooga Paint Co.
Druid Felt Co.
N. T. Felt & Co.
- Paper Mill Machinery.**
The Moore & White Co.
F. H. Davis & Co.
- Perforated Metal.**
Harrington & King Perforating Co.
- Phosphor Bronze.**
Phosph. Bron. Smelt. Co.
- Pig Iron.**
Lowe & Tucker.
Pickands, Mather & Co.
- Pile Drivers.**
Vulcan Iron Works.
- Pipe (Cast Iron and Steel).**
American Pipe Mfg. Co.
Annisston Pipe Works.
The Glamorgan Co.
Jackson & Woodin Mfg. Co.
Detroit Elbow Co.
Wells Rustless Iron Co.
Spiral Weld Tube Co.
Chattanooga Foundry and Pipe Works.
- Pipe Bend'g Wks.**
Jas. D. Cardell & Co.
- Pipe Covering.**
Shields & Brown Co.
- Pipe Handling Tools.**
Pancoast & Maule.
D. Saunders' Sons.
- Pipe Fittings.**
Pancoast & Maule.
- Plumbers' Supplies & Tools.**
Stewart Ceramic Co.
Milner & Kettig.
Haines, Jones & Cadbury Co.
Pancoast & Maule.
D. Saunders' Sons.
- Presses (Power).**
Becher & Peck.
Boomer & Boschert Press Co.
- Pulleys, Shafting and Hangers.**
P. Prybil.
Atlanta Machine Wks.
Webster & Comstock Mfg. Co.
Van Winkle Gin & Mach. Co.
Fitzsimons & Co.
Thos. K. Carey & Bros.
Union Drawn Steel Co.
Menasha Wood Split Pulley Co.
Warfield Mfg. Co.
Lane & Bodley Co.
Taper-Sleeve Pul. Wks.
James Smith & Co.
Eclipse Wind Eng. Co.
Hill Clutch Works.
Chat. W'd Split Pul. Co.
Webster, Camp & Lane Machine Co.
E. J. Wood.
- Pulley Covering.**
Nat. Pul'g Covering Co.
- Pumps (Hand and Power).**
Gould Mfg. Co.
Silver Deming Mfg. Co.
Van Winkle Gin & Mach. Co.
- Pumps (Steam).**
Eclipse Pump Mfg. Co.
Barr Pump'g Engine Co.
Van Duzen & Tift.
Deane S. P. Co.
Goulds Mfg. Co.
John Mainlin & Son.
Hy. R. Worthington.
Gordon Steam Pump Co.
Hughes Steam Pump Co.
- Pulsometer Stm. P. Co.**
Valley Pump Co.
Dean Bros. Stm. P. Wks.
Blakeslee Mfg. Co.
Laidlaw & Dunn Co.
Geo. F. Blake Mfg. Co.
Irvin Van Wie.
The A. S. Cameron Stm. Pump Works.
Jno. H. McGowan & Co.
The Smith & Vaile Co.
Buffalo Stm. Pump Co.
Rumsey & Co., (Lim.)
Boggs & Clarke.
- Punching and Shearing Machinery.**
New Doty Mfg. Co.
Long & Allstatte Co.
- Railroads.**
Cleveland & Canton R. R. Co.
C. M. & St. P. R. R.
Piedmont Air Line Co.
C. L. & W. R. R.
Old Kentucky Route.
Shenandoah Valley R.R.
Western Md. R. R.
Cin. Ham. & Dayton Rd.
E. Ten. Vir. & Georgia
Wheeling & L. Erie Ry.
Valley Railway.
- Railroad Equip'm't and Supplies.**
(See also R. R. Equipment and Supplies.)
Corey Car & Mfg. Co.
Jackson & Woodin Mfg. Co.
Benj. Watson.
Thos. K. Carey & Bros.
Dyott & Co.
R. T. White.
Robinson & Orr.
Humphreys & Sayce.
N. Y. Equipment Co.
Carlisle Mfg. Co.
Richmond Loc. & Mch. Wks.
- Wks.**
H. K. Porter & Co.
Penna. Steel Co.
Baldwin Locomo. Wks.
Wm. Minnigerode.
Alfred W. Ladd.
F. A. Estep.
Lowe & Tucker.
Russell Whl. & Fdy. Co.
Regional Canning & Co.
A. S. Males & Co.
O. W. Child & Co.
- Real Estate.**
(See also Towns.)
J. A. Hoover.
F. I. Chapman.
Jno. C. Field.
Southland Investm't Co.
Fulton Iron & En. Wks.
Niles Tool Works.
W. F. & Jno. Barnes Co.
H. L. Shepard.
Pancoast & Maule.
Standard Tool Co.
- Towns.**
Big Stone Gap, Va.
Bedford City, Va.
Cambridge, Va.
Kimball, Tenn.
Tredegar, Ala.
Cardiff, Tenn.
Greensboro, N. C.
Sumter, S. C.
Graham, Va.
Norfolk, Va.
Glasgow, Va.
Dallas, Texas.
Rockwood, Tenn.
Shedfield, Ala.
Waynesboro, Va.
Bessemer, Ala.
Florence, Ala.
Salem, Va.
Denison, Tex.
Middleborough, Ky.
- Trucks.**
Standard Scale Co.
Chickasaw Iron Works.
Tubel Well Supply Co.
Cook Well Co.
- Valves.**
Ashton Valve Co.
Mason Regulator Co.
Tenkins Bros.
Ludlow Valve Mfg. Co.
- Veneer Cutting Machines.**
(See Woodworking Machinery.)
Ventilators.
Merchant & Co.
Akron Htg. & Ven. Co.
E. Van Noorden & Co.
Cheney & Hewitt.
Wagon Springs.
Canton Spring Co.
- Water Closet.**
Haines, Jones & Cadbury Co.
- Water Motors.**
Wakefield Mfg. Co.
- Water Wheels.**
T. C. Alcott & Son.
Allentown F. & Mch. Co.
Christiana Mch. Co.
Jas. Lefel & Co.
Rodney Hunt Mch. Co.
Rome Fy. & Mch. Wks.
Stilwell & Bierce Mfg. Co.
Lancaster Turbine Wheel Co.
S. Morgan Smith.
Well Tools.
R. R. Rouse.
Lockwood Mfg. Co.
Wheelbarrows.
Grant McNeil.
Kilbourn & Jacobs Mfg. Co.
- Stuebner & Woods.**
Wind Engines.
Mast, Feos & Co.
Van Winkle Gin & Mach. Co.
Eclipse Wind Eng. Co.
Wire, Wire Rope, Barbed Wire, &c.
Williams'g W. Rope Co.
Ludlow Saylor Wire Co.
(Continued on Page 81.)

CARD CLOTHING.

JAMES SMITH & CO.

Woolen Machinery.

PHILADELPHIA,

Manufacturers of

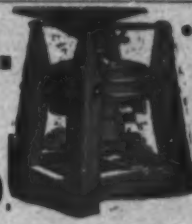
PENNSYLVANIA.

**Milling Outfits for Flour and Meal.**

WE MAKE ROLLS AND PORTABLE MILLS COMPLETE.

Manufactory Established in 1831.

Pamphlets with Prices Mailed Free.

NORDYKE & MARMON CO., INDIANAPOLIS, IND.**ELEVATORS****MORSE ELEVATOR WORKS.****MORSE, WILLIAMS & CO.** Successors to OLM & MORSE.

Manufacturers and Builders of HYDRAULIC STEAM ELEVATORS

With most approved Safety Devices.

BELT and HAND-POWER PASSENGER and FREIGHT

Dumb-Walters, Automatic Hatch-Doors, &c.

Office, 1105 FRANKFORT AVE.; Works, FRANKFORT AVE., WILDEY AND SHACKANAXON STREET, PHILADELPHIA, PA.

Send for Illustrated Circulars.

Branch Office, 108 Liberty St., New York.

MORTON, REED & CO., 3 & 5 German St., Agents for Baltimore.

Boston Office, 14 High St.

MINING, TUNNELING AND QUARRYING MACHINERY.

The New Ingersoll-Sergeant Air Compressors.

GADDERS,

ROCK DRILLS,

QUARRY BARS.

STONE CHANNELING MACHINES

COAL MINING MACHINES.

Send for complete priced catalogue of Mining, Tunneling and Quarrying Machinery.

INGERSOLL-SERGEANT ROCK DRILL CO.,

10 Park Place, New York.

**Southern Electrical Supply Co.**

— HEADQUARTERS FOR —

Electrical Goods of all Kinds, from a Wire Staple to a Dynamo.

Okonite Wire Cables and Tubing. Candes Weather-Proof Line Wire. Okonite and Manson Tapes.

Write for Catalogues.

823 Locust Street, bet. 8th & 9th, St. Louis, Mo.



TRADE MARK.

The LARGEST DRY KILN in the WORLD

WAS ERECTED BY

THE STANDARD DRY KILN CO., Louisville, Ky.

For the KENTUCKY UNION LUMBER CO., Clay City, Ky.

It consists of 20 Rooms, 13-85x17x9 and 7-125x17x9 feet.

Send for CATALOGUE containing numerous testimonial letters which demonstrate that "THE STANDARD" is the MOST PRACTICAL AND EFFICIENT "BLOWER KILN" made.

Low Prices. Easy Terms. Satisfaction Guaranteed. Payment contingent on fulfillment of Guarantees. Estimates and Plans sent on application.

The Standard Dry Kiln Co.

PATENTERS AND SOLE MANUFACTURERS,

1224 to 1230 West Main Street, LOUISVILLE, KY.



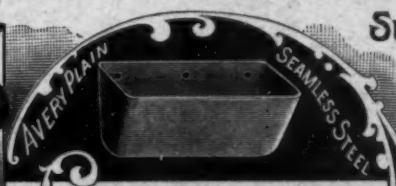
Supplies for

FLOUR MILLS, GRAIN ELEVATORS

COTTON SEED AND LINSEED OIL MILLS

SUGAR REFINERIES, STARCH AND RICE MILLS etc.

CEMENTWORKS.



STEEL RAILS, (ALL WEIGHTS) PIG IRON, IRON ORE, SCRAP.

ROBINSON & ORR,

Steel Rails and Fastenings.

419 Wood St., PITTSBURGH, PA.

WE BUY OLD IRON AND STEEL RAILS (for reworking or relaying.) WHITE PA.

BUFFALO SCALE CO., Buffalo, N. Y.

Headquarters for

RAILROAD TRACK SCALES and all other Scales.

THE DEANE STEAM PUMP CO.

Steam and Power Pumps
For all Purposes.

HOLYOKE, MASS.

Morton, Reed & Co.
AGENTS, BALTIMORE, MD.

Water Works Engines

NEW YORK.

BOSTON.

CHICAGO.

PHILADELPHIA.

ST. LOUIS.

Birmingham Office and Warerooms:

No. 6 SOUTH 20th STREET.

A SPECIALTY.

Send for Illustrated Catalogue.

WORTHINGTON STEAM PUMPS

SOUTHERN SELLING AGENTS:

THOS. C. BASSHAW & CO., Baltimore, Md.
KENTUCKY MACHINERY CO., Louisville, Ky.
PERRY MACHINE WORKS, Nashville, Tenn.
LIVERMORE FDRY. & MACH. CO., Memphis, Tenn.
FORSBERG & MURRAY, Washington, D. C.

SEND FOR ILLUSTRATED CATALOGUE

HENRY R. WORTHINGTON
NEW YORK.

SOUTHERN SELLING AGENTS:

SMITH & COURTNEY, Richmond, Va.
MECKLENBURG IRON WORKS, Charlotte, N. C.
E. V. WHITE & CO., Norfolk, Va.
M. SCHWARTZ & CO., New Orleans, La.
F. W. HEITMANN & CO., Houston, Texas.

Boston

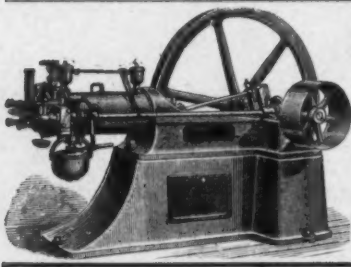
Philadelphia

Chicago

St. Louis

St. Paul

San Francisco



Over 18,000 in use. **OTTO GAS ENGINE**

20 to 70 per ct. less Gas Consumption than ANY OTHER ENGINE.

Working Without Boiler, Steam, Coal, Ashes or Attendance.
Started Instantly by a Match it gives full power immediately. When Stopped all Expense Ceases.
GUARANTEED TO CONSUME 25 TO 75 PER CENT. LESS GAS THAN ANY OTHER GAS ENGINE DOING THE SAME WORK.

No explosions, no fires nor clinders, no gauges, no pumps, no engineer or other attendant while running. Recommended by insurance companies. UN-
SURPASSED IN EVERY RESPECT for hoisting in warehouses, printing, ventilating, running small shops, &c. Sizes, 1 to 25 Horse-Power.

Branch Office, 151 Mon-
roe St., Chicago, Ill.

OTTO GAS ENGINE WORKS, Schleicher, Schumm & Co.

33D AND WALNUT STS.
PHILADELPHIA, PA.

GEO. DRAPER & SONS, of Hopedale, Mass.

SELL THE

Highest Grade of Twisters, Warpers and Spoolers.

SOUTHERN AS WELL AS NORTHERN MILLS REQUIRE THE HIGHEST GRADE.

THEY ARE CONSTANTLY INTRODUCING IMPROVEMENTS IN ALL LINES OF COTTON MACHINERY.

Shafting, Hangers and Pulleys { For Mills and Factories of every description.

Flour and Corn Mill Outfits Complete. { Highest Product

Over 1,000 of our Roller Mills in use.
Over 8,000 of our Portable Grist Mills in use. { Guaranteed.

We offer a Complete Mill and Sheller for \$115.00

Adapted to any kind of power. A boy can run and keep it in order.

NORDYKE & MARMON COMPANY, INDIANAPOLIS, IND.

Correspondence Solicited.

Write for pamphlet, "Mills and Milling."



For SUCTION, WATER, STEAM, GAS, AIR, ACIDS and for every purpose to which a Hose can be applied.

SPHINCTER GRIP
STEEL GALVANIZED

ARMORED
PAT. 1882, '83, '86, '88.

RESISTANCE to Great Pressure;
Unobstructed Flow of Water; In-
creased Flexibility and Perfect
Protection are some of its Advan-
tages.

WE GUARANTEE every foot sold to withstand constant service for such longer period as to render its actual cost much less in the end. Every wind of the wire can be cut without loosening or uncoiling.

The making, vending or use of any SERVICEABLE ARMORED WIRE-BOUND HOSE not of our manufacture is an infringement on one or more of our patents, and any violation will meet with instant prosecution. Brass plates mark each coil and admonish infringers, whether evil-minded or ignorant.

WATERBURY RUBBER COMPANY,

Sole Manufacturers and Proprietors,

49 WARREN STREET,

NEW YORK.

THE EMPLOYERS' LIABILITY ASSURANCE CORPORATION, Limited,
OF LONDON, ENGLAND.



Trustees for the United States:

OLIVER W. PEABODY, Esq.,
KIDDER, PEABODY & Co., Boston.
CHAUNCEY M. DEPEW, Esq.,
Pres. N. Y. Cen. and H. R. R. Co., New York.
SAMUEL SLOAN, Esq.,
Pres. Del., Lacka. and West R. R. Co., New York.
WM. A. FRENCH, Esq., Pres. Mass. National Bank.
ABRAHAM FRENCH CO., Boston.
HON. JOHN LOWELL, Boston.

Deposited in United States,

\$700,000.00.

Policies issued giving full protection to Em-
ployers against loss by Claims from Employees on
account of Accident. Rates Proportioned to
Risks of Occupation. One Premium the only
Payment during year. No Contingent or other
Liability on part of Employer.

Employers with Pay Rolls of \$100,000.00
already covered in United States. No Employer
should be without this Protection. Cases Inves-
tigated by Competent Inspectors and considered
by Eminent Counsel. If liability shown, Claims
settled without litigation.

ENDICOTT & MACOMBER, Managers for the United States, - - 71 KILBY STREET, BOSTON.

AGENTS—SAMUEL APPLETON, 25 Central Street, Boston; KIRBY & DWIGHT, 51 Cedar Street, New York; MIDDLE DEPARTMENT, TATTNALL PAULDING, Manager, 416 and 420 Walnut Street, Philadelphia; G. W. S. HALL, 413 Second Street, Baltimore, Md.; GEO. A. GILBERT, 226-228 LaSalle Street, Chicago; F. D. HIRSHBERG & BRO., 120 N. Third Street, St. Louis.

Send for New Catalogue **SUPERIOR WOOD-WORKING MACHINERY** to **CONNELL & DENGLE, Rochester, N. Y.**

0.

Co.

FREE

S

ENTS:

M. E. C.

laco

Gas
han
GINE.

esses.

K.

es. UN-

ower.

T ST.

PA.

rs.

ories
on.

et. tiling."

UND
olation
whether

7,

RK.

ed,

000,000
ployer
inves-
dered
Claims

.
Street,

N. Y.

MANUFACTURERS' RECORD

A Southern Industrial, Railroad and Financial Newspaper.

VOL. XVII. No. 19.
WEEKLY.

BALTIMORE, JUNE 14, 1890.

\$4.00 A YEAR.
SINGLE COPIES, 10 CENTS.

Manufacturers' Record.

PUBLISHED EVERY SATURDAY BY THE

MANUFACTURERS' RECORD CO.

President, Secretary and Treasurer,
RICHARD H. EDMONDS, WM. H. EDMONDS.

E. H. EDMONDS, EDITOR.
WM. H. EDMONDS, BUSINESS MANAGER.

OFFICE,
COR. EXCHANGE PLACE AND COMMERCE STREET,
BALTIMORE.

SUBSCRIPTION, \$4.00 a Year.
To Foreign Countries, . . . 6.50 a Year.

BALTIMORE, JUNE 14, 1890.

An Unauthorized Claim of Endorsement.

A FEW weeks ago the MANUFACTURERS' RECORD published an editorial suggesting that collections of the minerals of the South be exhibited at the international exhibition of mining and metallurgy, to be held in London at the Crystal Palace during the summer of the present year. A circular has recently been issued by the "Southern Inter-states Immigration Bureau: Department of Organization: John T. Patrick, Commissioner," offering for a consideration to take charge of individual exhibits for that exposition. Accompanying the circular is sent a reprint of the above mentioned editorial from the MANUFACTURERS' RECORD, and it is stated in the circular: "the enclosed editorial of the MANUFACTURERS' RECORD, which you will observe is in every respect a full endorsement of our purpose."

The MANUFACTURERS' RECORD emphatically declines to be understood as endorsing or commending the "Southern Inter-states Immigration Bureau," either in this proposed plan or any other.

When this so-called "Bureau" shows some reason for its existence and has given evidence of good management, with some promise of accomplishing something in advance-

ment of the welfare of the South, or any part of it, we will be ready to commend it, but we wish it understood that under present conditions we have nothing to say for it, and this unauthorized attempt to commit the paper to an endorsement of its schemes is a misstatement of fact, and an unwarranted perversion of the intent and purpose of the editorial quoted.

Restrain the Mississippi.

The floods on the Mississippi this year have been a national disaster. As long as the present conditions exist, these disasters are likely to occur annually. That something should be done to prevent them is beyond controversy. We are glad, therefore, to see that the Chamber of Commerce in New York, the most influential of any in the United States, and representing larger interests than any other, has, at a recent meeting, adopted a report made by a special committee, in which the recommendation was made to the President to bring the matter before Congress, with a view to protecting the lands adjoining the river from further inundation. Copies of this action will be sent to chambers of commerce throughout the country, and to members of both houses of Congress. This report and the resolutions accompanying it make a very strong article indeed, and one that appeals alike to the patriotism and the commercial instincts of the American people. We are very glad to see that a committee composed of such eminent men as Chauncey M. Depew, Cornelius N. Bliss, Edward H. Ammidown and Edward Simmons were appointed to go to Washington and push this matter.

The vast areas subject to overflow are among the richest in the Mississippi valley. They are populated by many wealthy planters, and by many more people dependent upon their labor on those rich plantations for the support of themselves and their families. It is perfect nonsense for the country from year to year to

deal with this matter by making repairs that last only until the next flood, and by making appropriations to sustain the people during their prevalence. The demoralization of the illiterate laborers of that section resulting from these charitable contributions was ably set forth by Mr. John P. Richardson, at the head of some of the greatest cotton planting interests in the world. The United States cannot afford to assist in pauperizing any part of its population by contributing at frequent intervals to their support, when it can, by proper engineering, and by sufficient appropriations to do the work the engineers recommend, save the whole country from any such disasters.

The MANUFACTURERS' RECORD hopes that every chamber of commerce in the United States will at once respond to the action of New York, and memorialize the President and Congress on this subject.

Southern-Made Railroad Material.

Fourteen Southern States had an aggregate of 40,541 miles of railroad lines at the beginning of the present year. This mileage represents one-fourth of the entire railway system of the United States, which amounted to 161,270 miles on January 1. Notwithstanding the enormous extent of the iron industry of the South, the great Southern railroad system depends almost exclusively upon the mills of Pennsylvania and the West for its rails, and the Southern railroads look mainly to the same sources for their track supplies, locomotives and rolling stock. There is every requisite in the way of raw materials in the South for the manufacture of everything that is called for in the construction and operation of a first-class railroad, and yet the needs of the 40,500 miles of Southern railroads are supplied mainly from mills far distant in the North and West. Pig iron from Southern furnaces is shipped to Pennsylvania and the West, and steel rails and locomotives go back over the same routes

to the South. Pine, poplar and oak from Southern forests, and car wheels cast from Southern iron in Southern foundries, are shipped to Pennsylvania and the Northwest to be made into freight or passenger cars that are to be sent away to the South again. In short, the South furnishes raw materials that are shipped to distant mills and shops in the North and West, where they are worked into finished products for Southern purchasers. The industries of the South thus get the smaller profits that low-priced raw materials yield, and employ the smaller number of common laborers, while other sections of the country derive the benefits of employment for skilled labor and the larger profits that are yielded by finished products.

It must not be inferred, however, that the South produces nothing in the way of railway material. There are a dozen or more car-building establishments in Maryland, Virginia, West Virginia, Tennessee, North Carolina, Georgia, Alabama and Texas, including several of the largest builders of freight cars in the country, while there are three or four new establishments now under construction; but Pennsylvania has more than twice as many car shops, and more than double the car-building capacity of the entire South. In the matter of car wheels, car axles, spikes and miscellaneous track supplies, the foundries and mills of the South yield a product of many thousands of tons each year. Richmond, Va., has a large and finely-equipped locomotive works, and a few locomotives are built in other shops in the South. Outside of a single Tennessee concern, there is not in all the South a mill equipped for rolling standard sections of steel rails. The utmost steel rail capacity of the South might suffice to supply the yearly requirements of two or three of the existing railroads, leaving nothing for the others or for new lines. Within the last two weeks a single Southern railroad company has placed an order for 16,000 tons of steel rails with a New York mill. Those rails and

twenty times as many more ought to be made in twelve months by Southern mills from Southern stock. At this time it cannot be done.

What the South is now making in the way of railway material is exceedingly small, as compared with the requirements of the Southern railroads and the extent of Southern resources. Every rail of iron or steel, every spike, bolt, fish-plate, splice-bar, car wheel, freight car, passenger car and locomotive that is needed by the Southern railroads ought to be made south of the Potomac. It ought not to be necessary to send a dollar out of the South for the purchase of material and supplies of this character. The great Southern market for railway material is growing and spreading at an amazing rate. In ten years the railroad mileage of the South has doubled, and under the pressure of increasing commerce, new mileage is still being constructed at a rapid pace. Of the total new mileage in 1886 the South furnished 20 per cent.; in 1887, 23 per cent.; in 1888, 35 per cent., and in 1889, 40 per cent. Nor will it be sufficient for the South to supply all its own needs. Instead of lumber, pig iron, bar iron and car wheels, let finished freight and passenger cars be sent northward and westward from Southern shops, utilizing at home raw materials that are now sent elsewhere, and giving employment to thousands of skilled workmen. Never before were these needs so forcibly indicated as they now are by the great railroad activity in the South.

Sales of Town Lots.

Wise men in control of the affairs of several of the most advancing towns of the South have seen the necessity of regulating, in a measure, the prices of real estate and making them to conform to its present actual value, and have endeavored, when sales were made of their city lots, to control them in the interest of conservatism. The leading financial men who are at the head of the Kimball Town Co. in advance of their first sale, which occurred on Tuesday and Wednesday of this week, originated a plan, unique and effective, that might be found of great advantage to other town building enterprises. At the christening sale at Kimball on Tuesday last, announcement was made that the company had fixed what it regarded as a reasonable valuation upon all the property that would be offered by the auctioneer; that those prices were placed upon the lots and were inclosed in a sealed envelope, and that none were apprised of that valuation except the executive managers. It was also stated that while the company wanted the judgment of the public as to the value of the property, and that could only be obtained by offering their lots for sale to the highest bidder without reserve, yet at the same time the company took

to itself all adverse risks and gave all chances in favor of the bidders, and it was to be done in this way: If the lots were sold at a value less than the company had placed upon them the company would give the deeds to the purchaser, and that ended the matter. If, on the other hand, in the excitement of the occasion the purchaser should pay twice, three times or any number of times more than the value that had been placed upon the lots, then, when the sale was over, those prices would be compared with the company's valuation, and the increase beyond that at which the lots were valued would be credited to the purchaser in kind. In other words, if a man bid for a lot and had it knocked down to him at \$5,000 where the company had valued it at only \$1,000, that man would receive not one lot for his \$5,000, but five lots therefor. This was an eminently wise and fair as well as an original and unique plan.

The same spirit of conservatism was manifested in the sales at Tredegar, Ala., two weeks ago. The company fixed certain prices upon its lots and declined to receive in any case more than these prices. The man who made the first selection of any particular lot got it at the price the company had placed on it, and offers from others to pay more for it were rejected. The values determined on were such as seemed, according to the most conservative estimates, amply justified by developments already made and industries already assured.

These commendable efforts on the part of the projectors of new towns to prevent the sale of property at such prices as it may take two or three years to grow up to, will give to the towns pursuing this conservative policy a prestige such as cannot be enjoyed by those whose principle is that they must have all the golden eggs at once, even if they've got to kill the goose to get them.

Furthermore, it should be remembered that the towns that can afford to follow this method are those that are founded on cheap and abundant and varied raw material, with other manufacturing advantages, and brains and energy in their management, and ample capital. Such towns do not depend upon the proceeds of real estate sales for the "sinews" of development, but in selling a reasonable number of their town lots at such prices as may make them "revenue-producing" as soon as built upon, they simply enlist thereby the interest and co-operation of the purchasers and go on with the work of actual, substantial, permanent development, creating every day a real increase in values, and not merely a rise in prices.

If you are not already a subscriber to the MANUFACTURERS' RECORD, send us \$4 and you will receive it regularly for one year, or six months for \$2.00.

The South on an Enduring Basis.

The Iron Age, the great exponent of the hardware trade of the country and one of the most influential trade journals published, has finally reached the point of admitting the solidity and permanency of the development and prosperity of the Southern States. The following was the leading editorial in the last issue of that paper:

The traveler through the South cannot fail to be impressed by the evidences of prosperity on every hand. He may have been inclined to discredit the laudatory articles on Southern progress which he had previously read, but the evidence of his own eyes is too convincing to be lightly dismissed. The residents of other sections have heard so much of the Southern boom in real estate and manufacturing property that it is not at all strange that they have been looking forward apprehensively to the time when the boom would collapse with disastrous results. This has been the case in other localities, and it is, therefore, to be expected in the South. But the predicted collapse does not yet come. Waves of prosperity and of depression pass over the country with the effect of increasing the Southern pace during the former and slackening it a little during the latter. The prophets of disaster have not entirely ceased to predict evil times ahead for Southern investments, but they have so often failed that greater confidence than ever seems to be reposed in Southern land and manufacturing schemes.

Sufficient time has now passed since the South entered earnestly into the manufacture of iron to demonstrate the reliability of the basis upon which it rests. This explains the situation and furnishes the reason why the expected collapse in Southern speculations has been so long deferred. Raw materials cheaply mined and lying close together, with but reasonable wages paid to labor, and ready access to the best market in the world for their product—these are the keys to the situation. The success of early enterprises has stimulated the establishment of others, and the stream of gold pouring into the South seems to grow larger in volume rather than smaller. So strong is the tide now flowing to the South that the industries of that section promise to be maintained for years, until some overwhelming financial crisis occurs of world-wide effect which will be as severe in Pennsylvania as in Alabama and in Great Britain as in Virginia. Fortunes are being made so rapidly in the South that capital is becoming domesticated there, and auxiliary enterprises which are being undertaken will serve to assist, if not support those which were first established.

It is a most promising sign of the times, and is as well an indication of the widespread prosperity of the South, that the manufacture of finished products is rapidly being introduced. Many of the new towns now springing up so rapidly in Virginia, Kentucky, Tennessee, North Carolina and Alabama will have blast furnaces, it is true, for their coal and iron ore deposits, make this industry natural and desirable, but at the same time steps are being taken to manufacture some more advanced product than pig iron for sale to other localities. This policy has been preached to the South ever since the beginning of an iron industry there. But the preaching would never have been effective without the great movement now in progress of active business men toward the South. They are seeking locations near the cheapest raw material in the country, so as to get every advantage possible in competing with other manufacturers. The most important question to

most manufacturers to-day is how to cheapen the cost of their product so as to preserve a foothold in the trade. And that question is being solved to some extent at least by the movement of factories toward the South, or by the establishment of factories in the South by enterprising men who see a better chance there than in the over-supplied North.

The general prosperity of Southern manufactures will not, of course, prevent failures of individual enterprises. Faulty locations can be selected in the South as elsewhere, and no advantages be realized. Insufficient capital is also a serious drawback in a country which is so slightly developed that the construction of wagon roads must be among the first improvements made. Heavy bonded indebtedness will make profitable enterprises stagger, and may cause sorrowing stockholders to condemn the entire section, because of their bad management of their own particular enterprise. Failures may occur here and there, as in fact they have already occurred among Southern business establishments, but they will not be general; and those who look for such a result to follow the extraordinary activity now prevailing in the South will be disappointed.

The foregoing is the more significant and striking in view of the fact that the Iron Age has been, itself, one of those who, having "heard so much of the Southern boom in real estate and manufacturing property," was "looking forward apprehensively to the time when the boom would collapse with disastrous results." In a recent issue it said:

In some instances the prospective city rests on very flimsy foundations, and the bubble of real estate inflation is sure to burst with disastrous consequences to those who have failed to unload on their less wary brethren. * * * The record of some ambitious enterprises started a few years since has clearly foreshadowed the future of many now being floated. Others are bound to be overtaken by the coming collapse before their completion. The latest developments, however, would indicate that the day of disenchantment has not yet come. The excitement is apparently still rising.

It is gratifying indeed to see this able journal now admitting the groundlessness of its former fears and gloomy forecasts. As a "prophet of disaster" it has not been an eminent success. It has pointed out at different times that Birmingham was clearly without any substantial foundation, and must collapse "with disastrous consequences;" that Anniston could have no permanent industrial future, and that Middlesborough was a predestinated failure, but none of these forebodings have come to pass, and now the conclusion is finally reached that "the predicted collapse does not come. Waves of prosperity and depression pass over the country, with the effect of increasing the Southern pace during the former and slackening it a little during the latter. The prophets of disaster have not entirely ceased to predict evil times ahead for Southern investments, but they have so often failed that greater confidence than ever seems to be reposed in Southern land and manufacturing schemes," and that they who look for general failures among Southern business establishments "to follow the extraordinary activity now prevailing in the South will be disappointed."

A Premature Boom.

A certain town in Southeastern Kentucky, well situated in a region of an abundance of raw materials, and on the Queen & Crescent route, recently bestirred itself and got up a boom. Well-situated tracts of land were cut up into town lots, the coming boom was extensively advertised in local papers of the surrounding country and the world was requested to keep its eye on that particular town. People in the town lost their senses; lands were sold and re-sold from one townsman to another, each time at an increase until prices were fabulous. The day of the great public sale came. The band played and the auctioneer talked his best, but it was of no use. Only a baker's dozen of people collected and none of them were bidders. No offers were received for lots and the boom was over. It had had no foundation.

Had these people established industries before offering their lots for sale, and thus created a basis of values, there would have been plenty of buyers at good prices, and their town would have been on the highway to prosperity. But in their feverish anxiety to become wealthy suddenly, they have ruined themselves and buried their town in oblivion.

The sale of lots is, of course, a necessary part of every town-building enterprise, but the town-building is also a necessary part of it. No well conceived and properly conducted scheme of development in the South has ever failed. Where there has been judicious selection of locality, able and energetic management and sufficient capital, there has always been success, but a part of the "management" has consisted in the establishment of factories to utilize the raw material, whose managers and employes would make up a population needing land for its stores and dwellings. Any attempt to ignore this foundation and build in the air will result in failure, and ought to.

Developer Versus Boomer.

The New York Herald has recently had something to say in regard to Southern "boomers" that has been taken up and endorsed by the Atlanta Constitution. Without quoting the language used, the argument amounts to this, that the South, like the North and West, has been cursed to some extent by the presence in its midst of professional "boomers." That class of men are as distinct from the real developers as the parasite is from the tree upon which it fastens. There are hundreds of men in the South, of native and Northern birth, who by their brains, their energy, their tact, their experience, their knowledge of the country's resources and of how they can be utilized, are building up the wilderness, establishing industries, investing their own capital and inducing others to join them, and are steadily advancing the era of pros-

perity upon which the South has entered, so that from month to month the pace increases, and the volume of business grows greater and greater. But these men are not the "boomers." That term, in its obnoxious sense, applies only to the men who swim on the surface of things and attempt to advantage themselves by the serious work done by others.

From the time that Yankee migration began to go west of the Hudson, and out to settle up Ohio, Michigan, Indiana, Illinois and so on through the great Northwest, and later on continued as the continental roads were built across the Rocky mountains and to the Pacific slope, the earnest, hard working, faithful developers have always found close by their sides the "boomers." It is an ancient proverb, running back beyond any historical date, that "the flies gather where honey is spilled." The "boomer," as distinguished from the developer, is the fly feeding on some of the honey the busy developer has made. The Herald, therefore, was right to a certain extent in its criticisms, but it should have drawn a distinction that all would understand between the industrious, practical, experienced developer and the noisy parasite that is nothing but a "boomer."

A developer is also a boomer, but a boomer is not necessarily also a developer. A man who is bringing about the growth and development and upbuilding of a town is laying the foundation for a substantial and desirable "boom," and is both a developer and boomer, but the man who is seeking to "boom things" without such a foundation, and merely to work up immediate and temporary speculative excitement, is only a "boomer," and as such is a curse to any community.

A Prediction.

If the managers of the land company can, in two months, and without any previous preparations, accomplish the great results already shown in securing two furnaces, a \$50,000 bank, electric-light works, a telephone system, an entirely new railroad (which is shortly to be built here and for which all surveys have been made public) and virtually made contracts for a rolling mill, basic steel works, tannery, etc., what may we expect of the same vigorous management within six or twelve months. Besides all these enterprises negotiations are pending for at least a dozen more. Tredegar's future is indeed brilliant. The Republican, knowing something of the great developments that are to take place here, predicts that every foot of property sold this week will more than double in value by next October, and many people who at this sale buy property at \$20 to \$30 a foot will sell next fall at \$75 to \$100 a foot.—The Republican, Tredegar, Ala.

THE purchase of the St. Louis & San Francisco Railroad by the Atchison is regarded as a most fortunate move on the part of the Atchison. It is the consummation of a plan that was contemplated years ago. The purchase is claimed to have been a remarkably favorable one, and promises to be an important factor in lifting the Atchison from its heavy burdens.

Lynchburg's Future.

[Special Cor. MANUFACTURERS' RECORD.]

LYNCHBURG, VA., June 7, 1890.

For many months it has been predicted that the enormous industrial activity in Southwestern Virginia would crystallize at Lynchburg, which is to-day one of the greatest railroad centers in the State. Those predictions are now being realized. There are two great companies at work with plenty of money, brains and energy, improving the occasion. For years and years this have been the metropolis not only of Piedmont, Va., but of the incalculably rich region known as the James river valley. Until now it has been one of those towns which has had greatness thrust upon them. Its population has doubled since the last census, almost entirely by reason of the development of the tributary country. There are to-day far on to 30,000 people in Lynchburg and its suburbs. The next census after this will show far on to a hundred thousand. Had Lynchburg availed itself of its opportunities in the past as it is now availing itself of those opportunities, the census now being taken would have shown double the present population.

The trouble with Lynchburg has been not so much lack of liberality on the part of its citizens as lack of knowledge as to how to proceed. The conviction that the place had a great future before it has been in every mind; but no one came to the front with a practical plan for the materialization of that universal conviction. Every one admitted that something had to be done, but when the question was asked "how ought it to be done," there was no response.

The town stands on a hillside. The river James is its northern boundary, the Blackwater creek its western. The hill behind it is so high that it was considered an insurmountable obstacle. There was a magnificent plateau just northwest of Blackwater creek, but the creek during the countless ages of the past had washed a deep indentation between the existing city and that glorious tract of level land. This indentation was therefore considered an impassable barrier to Lynchburg's westward growth. There was a great demand for houses, but there was apparently no available ground on which to build those houses.

A few months ago, however, Senator Daniel conceived the idea of a belt railroad behind the hill. The result was the opening up of hundreds of acres, which the West Lynchburg Company is about to improve and fill with houses. Shortly afterwards Major E. S. Hutter, who is one of the most experienced of Virginia's iron miners, thought of a bridge across Blackwater creek. The outcome of these two ideas will be such an upbuilding of Lynchburg as may threaten to rob Richmond of its laurels as chief city of the Old Dominion.

That its existing and prospective advantages entitle it to a future so magnificent is undeniable in view of the railroads which center at Lynchburg; in view of the dozens of rich counties of which it is the distributing center, and in view of magical multiplication of industries and consequent increase of prosperity and population throughout the region of which it is the established metropolis.

If I have been asked once, I have been asked a score of times: "What is the matter with Lynchburg?" To such inquiries I have always replied with this bit of advice: "Go buy land around Lynchburg and wait. It is only a question of a few months when Lynchburg will forge forward to the front." But despite the

fact that I was presumed to be in a position to know the merits of Southern localities, my advice was comparatively unheeded, because Lynchburg money was going into all the towns in the South and West except Lynchburg.

And why? Because nobody had thought of the possibility of a belt railroad, and of what is more to the point, of the practicability of a big broad bridge across Blackwater creek. But no sooner had Major Hutter given wings to his brilliant conception than every man in the town and out of the town at all familiar with the topography of the place was moved to acknowledge that the problem had been solved. The consequence is that land which three months ago was going a-begging at from \$50 to \$100 an acre, is now worth from \$500 to \$2,000 per acre. This is the result of Hutter's idea.

And this result forces us all to acknowledge that, after all, ideas rule the world. All the great patents compel us to wonder why so long a time elapsed without some one thinking of the simple principle which underlies them. The ditch made by Blackwater stopped the up-river growth of Lynchburg. It was the simplest problem in the world to solve. And yet its solution for a generation staggered the wisest heads. Main street was crowded with houses to the very brink of the creek. Just across lay land better adapted for town growth than any in Lynchburg, and yet a bridge was never suggested. Within three months Blackwater creek and the track of the Norfolk & Western Railroad will be crossed, and Main street will be extended into Rivermont. This bridge will bring vacant lots within 400 yards of land now worth \$500 a front foot. This unoccupied area lies to the westward, and experience shows that all cities grow to the westward. There are between 4,000 and 5,000 acres in this high plateau. These acres are worth not less than four or five millions of dollars. The Rivermont Co.'s assets are thus worth two or three times its capitalization. In other words, Rivermont stock is certain to double in value. A dollar placed here is sure to bring two within six months, and all on account of Major Hutter's bridge.

Pursuant to this idea—or rather this discovery—the Rivermont Co. was organized. Men of affairs from Roanoke and other enterprising points saw the situation and subscribed for stock. The land was purchased at low prices. The company will further enhance its value by locating industries—by making pay-rolls. The company is called "The Rivermont" because its lands overlook the James from a high and healthy elevation. Hereafter no one will ask the question: "What is the matter with Lynchburg?" On the contrary, investors will ask: "How can we get into Lynchburg?" Aye, investors will swarm to Lynchburg like honey bees to the first spring flowers. THOMAS P. GRADY.

NEARLY all the railroad companies seem to be increasing their earnings considerably. The increase of the Baltimore & Ohio, mentioned last week, was remarkable. The Atchison, Topeka & Santa Fe Co. report earnings of \$654,301 in the second week of May, 1890, over \$489,331 in the corresponding time in 1889. For the first two weeks in May, 1890, the earnings of the company were \$1,282,529, which was nearly \$300,000 more than was earned in the first 14 days last year.

ADVERTISERS wishing to reach the manufacturers of all classes, mining companies, steel, iron and hardware dealers of the entire South cannot find a better medium than the MANUFACTURERS' RECORD.

GENERAL NOTES.

THE estimates of the cotton crop, as made by the MANUFACTURERS' RECORD, are verified by the New Orleans Cotton Exchange statement just issued, showing that 7,078,615 bales of the crop have come into sight. Up to this time last season, the amount brought into sight was 6,805,112 bales. Of the supply for this season, 2,197,292 bales have been taken by American and Canadian mills, including 429,587 south of the Potomac, and 4,725,047 bales have been exported to foreign points. Northern mill takings and Canada overland are 32,960 bales ahead of the corresponding time last year, and the excess in foreign exports is 220,537.

THE auction sale of land and lots at Asheville, N. C., last week netted over \$100,000. There was, in addition, one private sale of a part of the same property at \$40,000.

THE new directory of Roanoke, Va., just issued, contains 7,258 names. This indicates a population of at least 22,000, showing a remarkable growth in twelve months, as last year's directory contained only 4,352 names, indicating a population of about 14,000.

Do the so-called boom towns in the South continue to grow? Fort Payne answers the question. In addition to the many large industries underway and others in prospect: the sale of the treasury stock of the coal and iron company is progressing satisfactorily, and the sale of the entire block will give the company \$370,000 in cash. The Bank of Fort Payne has increased its capital from \$50,000 to \$100,000. The stock of the Savings Bank has been taken and \$25,000 of the \$50,000 capital will all be paid in by the 15th. It is safe to say that by July 1st not less than \$445,000 of new money will come to Fort Payne, and nearly every dollar will be from outside sources. Last week an offer of \$100,000 was made for the DeKalb hotel but promptly declined, as the land alone is considered worth every cent of the price offered. Yet less than two years ago Fort Payne was a name used to designate a court-house and a few dilapidated shanties.

MR. W. P. RICE, the great Southern promoter, has established a bank in Boston in connection with Mr. W. M. Mick, the Eastern representative of the Union Investment Co. of Kansas City, (of which Mr. Rice is president), and Col. Milton H. French, vice-president of the Denison (Texas) Land & Improvement Co., (of which also Mr. Rice is president). The firm will be known as W. P. Rice & Co., and will do a general banking and brokerage business, dealing largely in Southern securities. One of their special lines of operation will be the locating of manufacturing establishments in the South. Mr. Mick has bought a seat in the Boston Stock Exchange for \$19,500.

THE Georgia melon crop will begin to move this week. This year's acreage approximates 29,000 acres, and the season thus far having been most favorable, the yield will be large and the quality prime. The great bulk of melons grown in Georgia for Northern and Western shipment are along the line of the Central from Savannah to Millen, from Macon to Fort Gaines, on the Chattahoochee, and from Macon to Albany and Leesburg, on the Southwestern Road; along the line of the Savannah, Florida & Western from Blackbear to Thomasville; on the Georgia Southern from its crossing at the Central Road to Waycross; in the Augusta melon belt, and on the Atlanta & Florida Road from Fort Valley toward Atlanta. The Western and

Northwestern shipments are all by rail, and when the fruit reaches the large cities is reshipped by local lines to interior towns. Steamships carry the bulk of melons for New York, Philadelphia, Boston and Baltimore. The Georgia melons are widely distributed throughout the United States and Canada.

WHAT appeared to be a rich copper mine was discovered some time ago near Blue Wing, in Granville county, North Carolina. Shafts were sunk and the vein opened for investigation. Recently Manchester Dickerson, as a mining expert, examined the property and has made a report on it. Mr. Dickerson has traced the vein for half a mile or more. It is somewhat variable in thickness, running from 18 to 36 inches. Two feet can be safely estimated as the average thickness. The ore is chiefly chalcocite (a sulphide of copper) and bornite (a double sulphide of copper and iron). A carefully selected average sample of ore from one shaft was assayed and showed 8.42 per cent. of metallic copper. From another shaft the assay was 12.67 per cent. A conservative estimate places the average assay above 7 per cent. of metallic copper. The vein is so situated as to be easily worked, and at present prices of copper could be worked very profitably. About two miles and a half from the mine is a considerable stream of water, on the banks of which would be a most available site for reducing works. Mr. Wm. Raker, of Blue Wing, has been prospecting in that locality for a long time, and about a year ago, in conversation with a representative of the MANUFACTURERS' RECORD, he confidently claimed that it would become a noted copper-producing center.

IT is reported that Fort Payne and English capitalists are endeavoring to purchase the Rising Faun (Ga.) and Chattanooga coke iron furnaces; also coal mines in Dade county, Ga., and other property of the Georgia Mining, Manufacturing & Investment Co. The furnaces are owned respectively by the Walker Coal & Iron Co. and the Chattanooga Iron Co., and leased to the Georgia Mining, Manufacturing & Investment Co. Their combined capacity is 55,000 tons yearly, which, it is expected, will be largely augmented by recent improvements.

AN important meeting has been called of the Newport News (Va.) Ship Building & Dry Dock Co. for next week. It is proposed to increase the capital stock of the company to \$2,000,000 and to raise money by a mortgage. Comprehensive as this plant seemed when first planned, this would indicate that its promoters find it too small and contracted for the needs of the times.

THE Valley Land & Improvement Co. at Luray, Va., is beginning operations on a plan commensurate with the size of the scheme, showing that the managers of the company are broad-gauge men. An engineer is now laying out and platting the company's lands and a commodious office has been opened, in which will be a large exhibit of iron and other minerals, specimens of natural woods and other raw materials which so abound in this region.

AT Americus, Ga., the owners of all unimproved real estate in and near the city have in hand a plan for the organization of a big company with a capital of \$1,000,000, which will be used to forward the interests of Americus and surrounding country. If the scheme is successful large sums will be spent in advertising the city, in enlarging street railways, water works, sewerage system, parking the various portions of the city and otherwise improving it, and to encourage and foster

manufacturing interests of all kinds. Factories will be encouraged to locate there by the investment company taking stock in their enterprises and offering bonuses. Already a car works, the plant costing about \$250,000, is talked about, and if the company is organized, will be erected. Several meetings have been held and a considerable part of the stock subscribed.

THE Cardiff Coal & Iron Co. is shipping ore to Rockwood, Dayton and Knoxville at the rate of 20 car loads a day. New openings are to be made at the mines which will increase the output one-half. This work will be begun at once. The Cardiff ores are of a superior quality and are in active demand. A special daily ore train is run by the Queen & Crescent Line to meet the demands of the company. The preliminary survey of the railroad to the coal mines is completed, and the engineers are now preparing their report. The iron mines are in close proximity to the town site and only a short distance from the furnace plant, and so situated that the ore can be delivered at the stock house by a gravity road. In view of the quality, quantity and proximity of Cardiff's iron ore, coking coal and limestone, all of which have been told about in the MANUFACTURERS' RECORD, there would seem to be nothing further needed for making iron at the lowest possible cost.

THE sales of city lots at Riverton, Ala., last week exceeded all expectations. The total sales for three days amounted to nearly \$250,000. The best price was \$67 a foot. The number of lots sold was 334. The Riverton Land Co. will remove its general office to Riverton as soon as a building is completed.

NOT far from the magic Middlesborough, Ky., is Barbourville, a new candidate for progressive honors. Two large brick kilns are in full blast, and a new iron bridge is being swung across the Cumberland river. The Barbourville Land & Improvement Co. has purchased all the surrounding territory about the town and is developing it. Broad avenues and streets have been laid out; macadamizing is being done; a permanent system of sewerage is being put in. The city is already lighted by electricity. It is stated that several industries will soon be started, among which are a spoke and handle factory and a chair factory. By reason of the quantity and quality of the timber of Knox county, Barbourville, the county seat, is well suited for the location of woodworking establishments. The town is situated upon the Cumberland river, which is the outlet for several of the mountain counties, covered with virgin forests. A fine new hotel is being built. A large system of water works will be soon under way. An artesian well is being bored, not to furnish water, it is said, but to see what underlies the town.

GOLD has been found in Prince William county, Va., on a farm near Independence Hill, 9 or 10 miles from Manassas. Two samples, assayed by Prof. P. B. Wilson, of Baltimore, show \$9 and \$13 to the ton. Prof. Wilson is reported as having said that the character of the ore is such that it can be easily and cheaply manipulated. Some parties from Baltimore have gone down to make further developments.

THE Staunton Improvement Co. has been organized at Staunton, Va., with a capital stock of \$200,000, of which one-half is to be issued at present. The company owns 400 acres of land adjacent to the town of Staunton, which it proposes to make valuable by locating factories on it. The company is already assured of a dressed beef factory to butcher 1,000 cattle a week, a wagon factory and other industries, await-

ing only the completion of formal organization to make definite contracts.

A MOVEMENT has been started at Middlesborough to erect on the "Pinnacle" at Cumberland, Gap statues to Generals Robert E. Lee and U. S. Grant.

IT is said to be now an assured fact that the Texas & Pacific Railroad will build to Denison, Tex., and that the Bonham road will be running into Denison by January 1, 1891. The Houston & Texas Central, one of the best built and equipped roads in the Southwest, starts from Denison and runs through the State to the Gulf, traversing some of the richest parts of Texas. The Missouri, Kansas & Texas makes its Texas headquarters at Denison, and has the southern terminus of its southwestern system there. Its large machine shops there furnish employment to over 500 skilled men, and its car shops employ 100 men more. An idea of the enormous business done there by this company is shown by the fact that they use nearly 50 miles of switch track. The Denison & Southeastern is a branch of the Missouri, Kansas & Texas. This road, with its connections, runs into Eastern and Southeastern Texas. The Denison, Bonham & New Orleans has been graded for fifty miles. This road runs in a southeasterly direction and passes through rich cotton and grain sections of Texas, and also through splendid lumber regions, and connects the principal roads in that part of the State with the coal fields of the Indian Territory. The Denison & Washita road is now building. Added to these, the Texas & Pacific & Cotton Belt, which is preparing to build into Denison at once, the Santa Fe, Frisco, Chicago & Pacific, Rock Island, which have charters through the Indian Territory, and are building in the direction of Denison, will give to that city about all the railroad facilities it could ask for.

THE New York Chamber of Commerce has passed a resolution favoring the construction of a continuation of levees along the Mississippi river to prevent further damage by floods. The resolution states that the Chamber regards the recent overflow as a national disaster, and requests President Harrison to bring the matter before Congress with a view to protecting the lands adjoining the river from further inundation. Copies of this resolution will be sent to chambers of commerce throughout the United States and members of Congress.

THE Corpus Christi & South America Railway, mention of which is made in the railroad notes of this week, will, if constructed, do wonderful things for Texas and the whole South. It will make Texas a commercial center of exchange for the two continents of North and South America. It is the most important project of its kind organized for years. The line from Corpus Christi to the City of Mexico will be hundreds of miles shorter than the existing ones, and open to commerce one of the richest sections of Mexico.

THE Wichita Valley Railroad was recently opened up for traffic from Wichita Falls to Dundee, Texas, a distance of 27 miles. The Wichita Valley Railway Co. was organized in February by E. W. Taylor, Morgan Jones, W. F. Somerville, G. P. Meade, J. P. Smith and J. G. Jones, of Fort Worth; G. W. Dodge and J. L. Granger, of New York. The capital stock was \$6,000,000. The road is now being rapidly pushed on to Seymour. This is distinctively a plan of the Fort Worth & Denver City Railway Co., which expects large returns from this 100-mile branch leaving the main line at Wichita Falls.

Subscribe to the MANUFACTURERS' RECORD.

Where Factories Pay.

[Special Cor. MANUFACTURERS' RECORD.]

STAUNTON, VA., June 5, 1890.

The mere matter of raw material, be it never so abundant, is not in itself—"no, not by a large majority"—a guaranty that factories will pay. Nor is the mere possession of transportation facilities an insurer that the candidate for industrial city-hood will "get there." There are a dozen other things that city-builders should take into account, prominent among which is the acquisition of the right kind of labor. Now, skilled labor is a thing with idiosyncrasies. It is whimsical; but its whims are not altogether unreasonable. There is a widely prevalent idea that labor will come with a rush to any place where employment is offered. And so it may, such as it is—in all likelihood vagabondish labor. Good labor, however, is as essential to the success of an industrial enterprise as good machinery.

The fact is, the industrial coast is strewn with wrecks caused by ignorance of the peculiarities of this great *sine qua non*. Unfortunately many town managers are as ignorant of those peculiarities as they are of how eclipses are calculated, or how newspapers are made to pay. Every practical manufacturer will tell you that labor is a gregarious thing—in other words, that artisans, mechanics and factory employes generally, like birds of a feather, flock together. If I mistake not the story was told, not long ago in these very columns, how a certain costly and magnificently equipped plant in a certain beautiful and aristocratic Southern town had to be abandoned because it was the only one in that town, and the comparatively few skilled workmen necessary to run it declined to live in isolation, although offered extraordinary inducements.

Show me a town with a good start in the way of industries, with craftsmen of various degrees already comfortably domiciled, with an established social system of their own, and I will show you a town possessing a tremendous machine for the acceleration of its industrial progress. With the other factors of success equal, such a town will easily out-strip its competitors, provided always it be not hampered by lack of organization; for in these days of almost feverish competition to make the most of the movement of industries from the North to the South, every edge must be made to cut.

The consideration of the labor question from this point of view was suggested by a cursory examination of some of the factories now in operation at Staunton, in this great, rich, prosperous Valley of Virginia, where are found such enormous wealth-producing elements that investigation forces the conclusion that industrial development here has barely reached its crisis. It will grow and grow for half a century perhaps before its wings are fully unfolded.

At Staunton there are a dozen establishments each employing from 10 to 200 hands, mainly white. Moreover, there are no fewer than 150 white skilled workers in a score of minor industries from bakeries to cigar factories. Careful investigation discloses the fact that every industry in Staunton, big and little, is prospering. There is a shoe factory, a great tannic acid plant, two furniture factories, a canning factory, a wagon factory, a couple of carriage factories, five brick-yards, a foundry and machine shop, a flouring mill, four establishments for making sash, doors, blinds and the like, and other smaller concerns too numerous to mention, every one of which is running at full capacity, and in most cases with orders ahead for the output of many months.

Such a satisfactory state of things would

be impossible at a town where labor was discontented. But far from being discontented, the skilled workman at Staunton has everything he wants, and the members of his family have everything they want that may be had anywhere in the Union. With a few more industries or even by increasing the capacity of those already in operation, there would gladly come to Staunton working people of a class whom no pecuniary proposal, no matter how tempting, could induce to locate in the midst of isolation. For here are to be found all those social and other requirements that workmen demand for themselves and for their families; here are found, likewise, places for gifted boys to earn their share of the fund necessary to make the home comfortable and cheerful.

Of course up to this time only a start has been made, for until now there has been no combination of men and money to promote the industrial prosperity of the place. Another difficulty, resulting from their being no organized plan of development, has been that people have hesitated about building houses, so that there are to-day only a few houses to be rented. However, so soon as the lands of the Staunton Development Co. shall be platted and opened up—a work which those skilled engineers, Messrs. Dunlap & Barnett, of Roanoke, will begin immediately—hundreds of houses will be built without delay. And still another obstacle to Staunton's growth has been the lack of rapid transit. This is being obviated by the construction of five miles of street railway, which will, within six weeks, reach the beautiful homesites of the Development Co. at three or four different points.

It was not, however, of Staunton in general that I started out to write—only of Staunton as illustrating the advantage of an established system of industries—of Staunton as showing the necessity of diversified industries as an inducement to labor.

Nor would I be understood as disparaging the prospects of the various vigorous new towns in the South, and, least of all, those in Virginia. On the contrary, I hope that the facts above stated concerning the idiosyncrasies of labor may prove profitable to such as are attaching too much importance to one or two big plants to the exclusion of a variety of smaller ones. Remember that the town whose industries furnish work to all the members of the workman's family will get more and better families to swell its population. And in this connection I could mention a dozen new towns whose managers are, with the utmost judgment, sagacity and energy, laying just such an industrial foundation as has been outlined. The fact that Staunton should possess, at the very start of its new life, just what it needed most, just what it would otherwise have been obliged to spend a great deal of money to secure, impressed me as a circumstance of such striking significance as to have a good effect in the cause of Southern progress—a circumstance calculated to lead to the investment of much Northern money in Virginia, and the location here of many Northern industries, and the removal hither of many self-respecting, skilled laborers.

Apropos of the location of industries, my attention has just been called to the fact that upward of two hundred thousand pounds of wool are annually marketed in this town. This fact is worthy the attention of owners of woolen factories, and as the woolen factory is one whose operatives can be secured to best advantage in locations already having an industrial population, the chances are that a woolen factory would pay at Staunton. With a free site, a liberal subscription by the Development

Co. to the capital required, there will doubtless soon be some one here anxious to work up at least a portion of that two hundred thousand pounds of wool. However, there are a great many other kinds of factories which will pay at such a point as this.

THOMAS P. GRASTY.

The Cardiff Company's Building.

This week sees the beginning of the Cardiff Coal & Iron Co.'s new building. Visitors to Cardiff will remember the sign erected on the knoll south of the hotel site. It then read, "company's building." A journey there this week destroys the illusion, for there will then be seen in its stead the actual work of progress. Architect Bosworth kindly explained the plans of the structure to a Herald man, his description being this:

The building will be an imposing and slightly structure. Standing as it will on the corner of Tennessee avenue and Inverness street, it will be in the heart of the business portion of the city, and it will draw to its neighborhood a fine class of buildings. The block will be 75x125, divided into four stores facing on Inverness street, three to be 23x64 and one 23x72. The Tennessee avenue front will be occupied by the First National Bank, with a banking room 25x50 and a directors' room 22x16. These rooms will be handsomely finished, and the directors' room will have a huge fire-place. Both rooms will be well lighted by large windows. There is an entrance from both streets in the alcove at the base of the tower, while from each street broad staircases lead to both the second and third stories, which are divided into large, well-lighted, airy offices, there being on the two floors 30 finely appointed apartments. The main offices above the bank are provided with fire-proof vaults, and all will be plastered and have hard pine wainscoting. The banking room and directors' room will be wainscoted in oak and finished in the most approved style, including all modern interior furnishings. The building will be pressed brick and limestone, with high slated roof with dormers, while the tower at the corner, resting on massive stone arches with 9 feet span, will give the building an imposing appearance. This tower is 60 feet high, and the upper portion will be fitted for an observatory. The style of the building is strongly Romanesque, a most popular form for this class of buildings. The block will be heated by steam and lighted by electricity, while the plumbing will be of the best. An approximate estimate of the cost places the sum at from \$35,000 to \$40,000. Work will be rapidly pushed forward to completion.—Cardiff Herald.

Iron and Steel for Architectural Work.

Concerning the rapid increase in the use of iron and steel for structural purposes, Mr. James E. York, a well-known Chicago iron man, is quoted by the Duluth News as saying that the Chicago Auditorium building alone used \$600,000 worth of such structural material. Leiter's building takes about \$320,000 worth and Rand & McNally's \$250,000. This is merely indicative of what one city is doing in this line. It is said that the World's Fair buildings will use up 60,000 tons of structural iron. In Chicago, at present, builders are using steel and concrete foundations, and are rapidly stopping the use of granite for such purposes. The elevated railroads to be built in Chicago in the next two years will consume at least 30,000 tons of structural material. What is said of Chicago is equally true of other cities, where even a cursory inspector of mammoth new buildings in process of construction will show how largely iron and steel have come into use. All of which is "meat" for the structural iron manufacturers.—Ohio Valley Manufacturer.

San Antonio as a Health Resort.

[Special Cor. MANUFACTURERS' RECORD.]

SAN ANTONIO, TEXAS, June 5, 1890.

Now that the fame of San Antonio as a health resort, especially for persons afflicted with lung and throat troubles, is being noised abroad, many persons are coming here to test for themselves the curative properties of this truly wonderful climate. Many men now foremost in business and social circles came here years ago to gain lost health, and with restored health came renewed energies and a desire to embark in business. These same to-day afford, by their robust frames and healthy glow, most striking evidences of the curative qualities of this pure and life-giving atmosphere. At an altitude of about 800 feet above the sea level, with no marshes or stagnant pools of water within a radius of 150 miles, this city is almost entirely free from those malarial diseases which are thought to be incident to all Southern localities. The consequence is the death rate here is remarkably low, and would be much lower but for the great number of consumptives who come here when too far gone to be benefited, and often die while being taken from the railroad depot to the hotels, or very soon after reaching the hotel.

So pure is the atmosphere here that beef may be cured in the open air without salt during the hottest days of summer, when the mercury is registering 90 degrees. Nothing is more common in the Mexican settlements than to see long lines of beef cut into thin strips and hung out in the air and sun upon a line just as you hang clothes for drying. In almost every grocery store you will find exposed for sale quantities of this dried and jerked beef ready cured and waiting to be converted into most savory messes. Even carcasses of dead animals may be seen upon the prairies with hides intact and bones kept rigidly in place by the tight-binding hides, which dry and contract around them as the fleshy tissues dry and disappear as fine dust, emitting little or no offensive odor.

From the last annual report of the city health officer, March 1, 1890, I find, under the meteorological summary, made by the United States army official stationed here, the following interesting figures which will serve to dispel the Northern delusion that we are burning up here under the fierce rays of a tropical sun. He gives for the past year, "mean temperature 68°, highest temperature 98°, lowest temperature 28°. So that the rays of the fervid sun of our Southland are so tempered by the cooling winds that blow all summer without intermission, from the Gulf, that our hottest days fall many degrees below the suffocating heat and stifling atmosphere of Northern cities. Among old residents and persons thoroughly acclimated, sunstroke is unknown, and the rare cases we do have are confined to new comers, mostly foreigners, whose habit has not been toned down by long residence. With a mild climate, free from the extremes of heat or cold, with pure southeast winds laden, not with pestilential malaria, but with life-giving ozone and free from noxious gases, with sparkling rivers that rush and dash and foam and leap as they hurry on to the sea, and artesian wells that gush up from the very bowels of the earth and send their sweet waters to mingle with the rapid streams rolling onward, San Antonio needs only to be well known to become the great health resort of this continent. Movements looking to the establishment of extensive sanitarium buildings and grounds, and the erection of grand hotels to accommodate the thousands that flock here when the chilly winds commence to blow are now in progress, and before another visitation of Jack Frost there will be ample accommodations for all who wish to test the wonders of this climate. We are not selfish down here; there is plenty of room and plenty of free air for all, and we are rejoiced to see the pale and hectic flush cheeks that greet us in autumn return to their Northern homes in spring bronzed with the glow of health.

ELIAS EDMONDS.

Virginia's Valley.

[Special Cor. MANUFACTURERS' RECORD.]

BASIC CITY, VA., June 9, 1890

There are half a dozen new towns in Virginia which are making wonderful strides, but among them all, during the last two months, Basic City has probably made the most extraordinary progress. Not so much in mere house-building as in securing industries to sustain occupants for houses. The policy of the Basic Co. was a wise one from the very outset. The imperative necessity of laying a substantial foundation was recognized, and vigorous work has been going on in that direction. There was no land put upon the market until enough factories had been secured to give lots in Basic City an intrinsic value. These industries were not contingent. The contract in each case was absolute. There was, moreover, a systematic plan of development. The plants secured were such as common sense guarantees the success of.

To begin with, a furnace company was organized. The town company owned the famous "Bear Mine" a few miles to the southward, and the quantity and quality of the brown ores from this mine are sufficient to supply this furnace for a number of years. The furnace is being built as rapidly as material can be secured. When completed it will be one of the finest in America. And in this connection it is worth while to say that in the score of in-

Chesapeake & Ohio and the Shenandoah Valley Railroads. There was no better natural town-site in America. Directly after the company's plan of procedure had been announced, there was such a demand for the stock that it commanded, and still commands, a considerable premium. At the outset Mr. Samuel Forrer, the president of the company, who is a plain, straightforward, sensible man, managed the company's affairs. Recently, however, the business of the company has increased so much that Mr. Forrer could not fill the office of chief executive and at the same time manage the work of progress going on within the city limits. The right man for the position of general manager was at hand in the person of Judge J. M. Quarles, who is not only a man of great judgment and prudence, but a powerful pusher.

Judge Quarles has gone about the work in hand by carefully studying the elements of industrial development. He is by nature a great organizer. With enormous powers of persuasion, an iron constitution, broad, liberal views, an abiding faith in the future of Basic City, Judge Quarles is accomplishing a work which will result in a pay-roll at Basic of a million a year. His whole heart and soul are in the work he has undertaken. For years he has been among the leading lawyers of the Valley of Virginia, but his faith in the resources of Basic City was so great that he has aban-

Basic is an ideal home-town. The scenery is suburb. The water is pure lithia. The elevation excludes malaria. The adjacent resources promise profitable employment to workmen of every calling—except doctors. As I have said, time and time again, there are to be a dozen new towns in the Valley of Virginia. My friend Major Vost, the editor of the Valley Virginian, published at Staunton, will shortly publish an article which will prove to the most sceptic that the resources of the region between Buena Vista and the Potomac will at the present rate of development sustain new towns with an aggregate population of 500,000. Among these future towns Basic City cannot fail to occupy a leading position.

One of the most serious obstacles to the upbuilding of the towns in Virginia's great valley is lack of building material. In this issue of the MANUFACTURERS' RECORD will be found an advertisement from the Basic City Co. for 3,000,000 brick, and one from Mr. J. C. Jones, a leading contractor, located at Basic, for a million feet of lumber. It is somewhat significant that a prominent contractor should have left so promising a point as Florence, Ala., to come to Basic City. At Florence Mr. Jones did much of the best building, his contracts having included such structures as the Lauderdale Club-house and many of the handsomest residences in that future metropolis of the Tennessee valley. Al-

syndicate of English gentlemen will show the following results:

Amt. paid for investment.	Amt. now bid for the investment.
\$10,800.... Buena Vista Land Co.....	\$27,000
31,250.... Radford Land & Improvement Co.	42,000
10,000.... Radford town lots.....	20,000
30,000.... Virginia Mining Co.....	114,000
7,000.... Doe Mountain Iron Syndicate..	14,000
25,000.... Norton Land & Improvement Co.	40,000

Investments made in 1889 within 50 miles of Staunton will show the following profits:

Cost.	Now worth.
\$37,000.... Iron Gate Land & Improvement Co.	\$300,000
50.... Buena Vista building lots.....	2,500
100.... Basic City lots.....	900

INVESTMENTS IN BUENA VISTA.

Par \$100.	Building & Investment Co.	Present premium.
" 100	Building, Light & Water Co.	125
" 100	Buena Vista Build'g & Imp. Co.	125@130
" 100	Lexington Improvement Co.	125@130
" 100	Buena Vista Fire Clay Co.	125@130

The hotel at Basic City will be one of the most magnificent in the South. Its position commands a view of all the plain to the westward. It will be supplied with water from a magnificent Lithia spring, which is alive with brook trout. This will in itself make the hotel a great summer and winter resort, because half the business men in America have some sort of kidney complaint, and this lithia water is a sovereign remedy for all such ailments. The trouble with many Southern towns has been lack of hotel accommodations. As I have frequently stated, people who have money will not stay where they are uncomfortable. The



dustries in course of erection at Basic none but the latest improvements are to be used. There will be no money wasted on superannuated machinery. Judge Quarles, the general manager, is not likely to be imposed on by sellers of old iron. In fact, Basic City was started with a sufficiency of capital, and hence there was no occasion to make fictitious showings. When the company first advertised for manufactories, it gave references which carried confidence. The consequence was manufacturers from all over the North felt that here was a concern that meant business—a concern it would do to trust—a concern able to keep its engagements.

That honesty is the best policy in town-building is as certain as that advertising pays or that the earth revolves. So far as this Valley of Virginia is concerned, there is not a single town company that I know of whose practices will not stand investigation. Most of these valley companies are backed largely by local capital and officered by men whose character is above reproach.

Now this Basic City company was no sooner organized than all its stock was taken, mainly right here at home, in the Valley of Virginia. There isn't a man in the directory who does not command the entire confidence of the community in which he lives. The company bought the lands surrounding the junction of the

done a lucrative law practice to make of himself a lever for the upbuilding of a great city at this favored location.

For my own part, I confess I have been a firm believer in the future of the place ever since its development was first talked of. In the beginning it was proposed to call it Ingalls City, and in an article so headed I dwelt at great length on its various advantages. The parties who proposed to build Ingalls City failed to secure money enough to take up their option on the lands available for a city-site. But it made no difference to me who should develop it. I wanted to see it developed, and I knew its development would pay. As a Virginian who had spent years away from home, I felt a natural pride in Virginia's new life. This location struck me as one which needed only men and money to be developed into a prosperous city. Its merit was undeniable. In this day and time every genuine success helps. On the other hand, every failure hurts. I knew that Basic City, like Buena Vista, would, in the right hands, be the means of bringing millions of money into the State. It is a matter of congratulation to the entire State that so many good towns are in the right hands.

In your issue of June 7 I accentuated the advantages of Luray under the caption "Scientific Town-sites." I might just as well have so headed this article. For

luring however as was the prospect at Florence, a bid for constructing more than 200 houses at Basic brought him back to his native land, and the same inducements which have brought my friend Jones back to Virginia will bring thousands of other Virginians home. More than a year ago I advised Virginians in the West to return. Had my advice been heeded the result would have been the profitable investment of millions.

And while I am discussing the question of profit from Virginia investments, permit me to reproduce from the Staunton Development Co.'s prospectus some facts and figures.

The following tables will show the increased value of lands obtained at other points, no better or more favorably located than Staunton, and many of them not so well favored:

	Cost.	Selling.
Roanoke Land & Improvement Co., organized in 1882, original cost per acre.....		\$180
Present value, selling price per acre, when divided into lots.....		\$1,500
Radford Land & Improvement Co., 1887.....	75	2,000
Pulaski Land & Improvement Co., 1885.....	40	1,500
Bluefield Land & Improvement Co., 1888.....	75	2,000
Crew Land & Improvement Co., 1888.....	23	875

The above are town-sites on the main line and New River Division of the Norfolk & Western Railroad.

Investments made in 1889 for a Virginia

moneyed man demands clean sheets, good bread, honest coffee and hairless butter.

Apropos of hotels, Staunton, which is the natural metropolis of the Valley of Virginia, has been loser to the extent of not a cent less than a million of dollars because she had no decent house of entertainment. My advice to Mr. M. Erskine Miller, the greatest town builder in Virginia, is to build a \$100,000 hotel on the lands of the Staunton Development Co. The moment this hotel is started Staunton will come to the front as the cynosure of every investing eye. At present the only comfortable hostelry in Staunton is the Kalorama, of which a good woman is proprietress, and where, if there was a sufficiency of rooms, thousands of guests would congregate.

Basic City realizes the importance of a good hotel. Already the best hotel on the Chesapeake & Ohio Railroad between Charlottesville & Cincinnati is at Basic City, but its accommodations are limited. The new hotel, of which an elevation is printed as an illustration to this article, will be ready for guests by October 1st.

But I have exhausted my space in prefatory talk. It was my intention to tell about the great car works, the paper mill, the hardware factory, the belt line road, and of other industries in course of construction at Basic City. Next week, or

week after next, I will describe in detail these great industries.

Inasmuch as I have headed this article "Virginia's Valley," it is right that I should say a word about Luray and Staunton, and Grottoes and Buena Vista, and Glasgow and Buchanan and Salem, but one cannot do justice in a page to what ought to occupy a book. As I have decided to make my future headquarters in the Valley of Virginia, the chances are that my *cacothès scribendi* will lead me to emphasize during the coming summer the advantages of all the good towns in Virginia and West Virginia.

THOMAS P. GRASTY.

DALLAS, TEXAS.

An Organization to Aid Manufacturers.

[Special Cor. MANUFACTURERS' RECORD.]
DALLAS, TEXAS, June 5, 1890.

Dallas, the commercial capital and the manufacturing and railway center of this great State, is located in the central northern portion, in the center of a belt of 37 counties, including in a radius of 100 miles, as rich and productive an agricultural section, generally speaking, as there is in the world. It produces over one-third of the 1,250,000 bales of the Texas cotton crop. Over one-third the entire population of the State is found within this 100-mile radius about Dallas.

The rapid growth of Dallas the past two and a-half years has attracted wide-spread attention. With a population of 30,000 in 1886 the city now has, including the suburbs, 60,000 inhabitants, having doubled in population in four years. The foremost citizens who take the lead in the up-building of Dallas are thoroughly enterprising, and they have a proper appreciation of the importance of manufacturing enterprises. To this branch of industry is due a large share of the rapid increase in population. There are in Dallas not less than 120 manufacturing concerns, representing an aggregate investment of \$4,000,000, and furnishing employment to 3,000 operatives. The value of the output of these factories is about \$8,000,000 annually.

For the promotion of manufacturing interests and for the encouragement of manufacturing enterprises, a number of public-spirited, progressive citizens came together several months ago and organized the Dallas Manufacturers' Aid & Improvement Co. They fixed the capital stock of the company at \$500,000, and procured a charter from the State to do business. Dallas might well be selected as the home of such an important enterprise, since it is the financial and commercial center of the most fertile country in the United States, affording a splendid home market for manufactured articles, and being situated in close proximity to cheap fuel and raw material in abundance. Having cheap homes for employes and unsurpassed railroad facilities, affording the most desirable channels of distribution to all parts of the State and all adjacent States and Territories, and having by long odds the lead over any other city in the State in the magnitude of manufacturing enterprises, it is undoubtedly one of the most desirable points for the establishment of manufacturing in the growing Southwest. The Dallas Manufacturers' Aid & Improvement Co. owns 400 acres of land on Cedar creek, near the northern city limits, about two miles from the business center. The property is elevated, has fine drainage and an abundance of pure water. In addition to Cedar creek, which runs through the property and is fed by living springs, an abundance of water sufficient for the needs of any manufacturing plant may be secured by digging 18 to 20 feet.

A portion of this tract of land has been reserved to be divided into sites for factories, and a portion has been platted into lots which will be sold to factory operatives, or on which houses will be erected for rent to operatives. The property of the company includes also an area remote from the factory part, that is the most desirable residence locality around the city. In consideration of locating on its property, the company offers to a desirable class of factories, such as cotton and woolen mills, furniture and carriage factories and others on this line, special inducements in the way of donations of land for sites, subscriptions to capital stock, etc. For specially desirable enterprises cash bonuses will be given, this to be regulated by the number of operatives to be employed and the magnitude of the enterprise. With all the natural advantages possessed by the locality, supplemented by the inducements offered by the company, the opportunity presented to manufacturers is an extraordinary one.

The grounds are connected with the business center of the city by macadamized driveways, and an electric car system, running out beyond the Northside park, will furnish the most desirable quick transit to the property.

The officers of this company are: J. N. Simpson, president; O. P. Bowser, vice-president; N. A. McMillan, cashier; E. G. Knight, secretary. Alex. Sanger, C. H. Cooper, J. C. O'Connor and the officers named compose the board of directors. Among the stockholders are such men as Col. Henry Exall, appointed by President Harrison as one of the commissioners from the South to the World's Fair; W. C. Connor, mayor of the city of Dallas; Jules Schneider, president of the Consolidated Street Railway Co., and other prominent and leading citizens.

The development of the company's property has already commenced. A large baggy factory, which recently moved here from Kalamazoo, Mich., is just completing three two-story brick buildings, each 50x150 feet, on a site donated by the Manufacturers' Aid & Improvement Co. Negotiations are about concluded for the erection on one of the sites of a cotton mill capitalized at \$400,000. Every cent of the stock in this enterprise is owned by a New England syndicate. The mill will have 25,000 spindles, and it will furnish employment to 600 mill operatives. Negotiations with two or three other enterprises of less magnitude are pending.

The splendid facilities and the desirability of the location attract the attention of all manufacturers coming this way, and the foresight and enterprise of the gentlemen composing the Manufacturers' Aid & Improvement Co. in offering such valuable franchises and inducements to manufacturers promise to aid materially in developing productive industries in Dallas and in the new Southwest.

THE work on the large round-house and shops being built by the East Tennessee, Virginia & Georgia Co. is being rapidly pushed, and Knoxville will soon have the satisfaction of having within its limits one of the largest plants in the South operated by a railroad company. The machine shop is to be 321x100 feet in size; the blacksmith shop and paint shop each 321x90 feet, and the woodworking building 341x90 feet. The machine shop has attached to it a building 98x47 feet in dimensions, which is to include the brass foundry, boiler shop and engine room. The round-house is said to be the largest ever built in the South. It is shaped something after the manner of a crescent, but is proportionately much broader. It is built of brick and stone, and has a capacity of 125 locomotives. The plant is completed with the offices and storehouse, which are to occupy a brick and stone building 183 by 50 feet.

AUSTINVILLE, VA.

Its Advantages of Raw Materials, Fine Site and Transportation Facilities.

[Special Cor. MANUFACTURERS' RECORD.]

AUSTINVILLE, VA., June 7, 1890.

It has been remarked, and very aptly, that Virginia is the mineral center of the universe, and judging by what I have lately seen, this saying must be true.

Several days ago I visited the Wythe Lead & Zinc Mine Works, located here in Austinville, on the Cripple Creek extension of the Norfolk & Western Railroad, at the invitation of Mr. J. P. M. Sanders. I obtained a view of the property recently acquired by this company, and also a look at probably the most extensive and valuable bodies of lead, zinc and iron ores yet discovered in Southwest Virginia.

These lead and zinc mines have been operated successfully and without intermission for more than one hundred years. They furnished material for our forefathers in the Indian warfare and in the Revolutionary struggle. From their product the Confederate Government drew much of its supply of lead. Although worked for this long period, the mines show no diminution in their yield. On the contrary, the supply of ore appears so great as to defy computation, and the mines are in better condition now, for extensive and economical working than at any previous time in their history. The present company proposes to develop all the real estate connected with the property and lying in Wythe and Carroll counties and fronting on New river for a distance of four miles. The mines and both of the furnaces are now in successful operation. A large force of workmen are constantly employed, procuring the raw material, still, the supply does not equal the demand. In order to increase the capacity of the furnaces, employ additional labor, and further develop the zinc, lead and other ores, the present company has organized on a most comprehensive basis.

Two thousand shares of stock of the par value of \$300 each have been offered to the public and constitute the capital stock. One-half of the subscription is to be paid in cash, and the remainder in three and five months.

The property is situated directly on the line of the Cripple creek or North Carolina extension of the Norfolk & Western Railroad, and embraces 5,500 acres of land, 1,000 acres of which are especially and admirably adapted for the location of a large and prosperous mining, manufacturing and residence city. The building lots lie upon an elevated plateau and afford a beautiful view of the country for miles and unfold to the eye a panorama of rare beauty and grandeur. As far as the eye can reach, rich agricultural lands are visible.

Within a few feet of the station zinc, lead and hematite ores are found in large quantities. The varieties are unusually rich and pure. All over the property have been discovered beds, banks, basins and veins of ore. With ample railroad facilities, one of the most complete reduction works in the United States, and a rich outlying agricultural country, this property will prove an important factor in the up-building of Austinville. The town heretofore has been content to remain in innocuous desuetude, but men appreciating the value of these great mineral resources have concluded to lift the ancient village from its peaceful slumbers and place it high in the industrial phalanx.

The new company secured two brick dwelling houses, 50 tenement houses, roasting and smelting furnaces for lead, two zinc furnaces, saw mill and planer, shot tower, ore and stone crusher, four turbine wheels, air compressor, air drills, cornish rolls and all the necessary machinery and appliances for the mining, operation and reduction of lead and zinc ores. At the present time over 100 men and boys are employed in the different branches of work, some at the mines, others in the various works. The supply of lead is now consumed on the ground. The shot manufactured here is equal to any in the country, and the demand for lead bars cannot be supplied. The zinc is shipped in large quantities to New York and Massachusetts. The plant now used for the concentration of ores is conceded to be a most perfect and reliable one.

The value of this lead deposit will be more keenly appreciated when it is taken into consideration that the bulk of the lead supply of this country comes from Colorado, Wisconsin and other Western States, and being very heavy metal, the cost of transportation is great. And with the cheapness of fuel, fine climate and universally fine sites for factories at hand, all the lead produced from these mines can be manufactured here in Austinville, and the manufacturer's profits thus be kept at home. With the zinc, too, most of this country's supply comes from Missouri, Kansas and other Western States, though New Jersey and Pennsylvania produce some. But with the advantages that Austinville possesses, there is no reason why industries will not spring up here very shortly that will bring to the lap of this town the trade of the whole South in these metals. This will include not only trade in lead and zinc goods, but also in paint materials and the like. In these lines of trade there is an enormous traffic, and as these are a good grade of goods, the profits are correspondingly greater than in the cheapest grade of goods, where competition keeps profits very small. The Norfolk & Western Railroad furnishes railroad facilities second to no other road, and as the manufactures of both lead and zinc are very heavy, Austinville will have a practical monopoly of this class of goods for a large area of territory. With the proximity of all the rapidly growing towns of Southwestern Virginia, and the great demand there is for lead, zinc, paint and other manufactures, the stockholders in the new company feel confident that they have in this town every requisite for a large industrial center. The fine water-power at hand offers rare advantages for factory sites, and the company will offer every reasonable inducement to secure the establishment of the industries mentioned and kindred ones.

One of the decided advantages in the formation of the new company will be the fact that all of the operators are familiar with the work, and with \$100,000 in the treasury as working capital, a new impetus will actuate the projectors, and in place of 100 tons being raised 300 tons can as easily be prepared for market, thus providing a handsome income to the stockholders.

Two thousand lots embraced in the 1,000 acres will be distributed to the subscribers, one lot to every share. The residue of the property is to be held by the company, while every effort will be made to attract new industries. I am reliably informed that the stock is being subscribed for rapidly. With the advantages of raw material in abundance, excellent water-power, accessibility to railroad, good climate, there would seem to be nothing more needed for Austinville to become one of the active towns of Southwest Virginia.

CHAS. E. HERRERT.

TREDEGAR,

Tredegar offers the most inviting field in the United States for the establishment of manufacturing enterprises.

It has unequalled advantages for Iron and Steel Works, such as Furnaces, Rolling Mills, Machine Shops, Foundries and everything using iron.

Car-Wheel Works, Car Shops.

Cotton Mills, Knitting Factories, and other Textile Industries.

Cotton-Seed Oil Mills and Fertilizer Factories.

Woodworking Industries of every sort, Saw and Planing Mills, Sash, Door and Blind Factories, Furniture Factories, Handle and Spoke Factories, Agricultural Implement Works, Carriage and Wagon Factories, &c.

Brick Works for making Building Brick, Vitrified Brick, Fire Brick, &c.

Sewer Pipe Works.

And many other industries.

The most liberal inducements will be offered to those who desire to locate such industries.

Here are found the finest Hematite Iron Ores in the South.

Extensive Manganese Deposits that experts from Pennsylvania and elsewhere believe to be the greatest in the United States.

Vast Forests of Fine Timber, Pine and many varieties of Hardwoods.

Never-failing Mountain Springs with a daily flow of many million gallons of the purest Freestone water, besides Sulphur, Chalybeate and other Mineral Springs.

A climate that has no superior for all the year; malaria is unknown, and the nights are cool even in midsummer.

A Fertile Agricultural Country, where cotton, grains, grasses, fruits and vegetables yield abundant crops, and where fine Jerseys wade knee-deep in clover.

A population of 3,000, churches of all denominations, excellent schools, charming society.

A National Bank, Water Works, Fine Hotel.

Will build Two Furnaces, Rolling Mill and probably Basic Steel Works, Cotton Mill, &c.

For particulars address GOLDSMITH B. WEST, General Manager JACKSONVILLE MINING & MANUFACTURING COMPANY, Tredegar (Present Postoffice, Jacksonville), Alabama.

ALABAMA.

CARDIFF.

The Cardiff Coal & Iron Company,

CARDIFF, TENNESSEE.

Capital, \$5,000,000.

Fifty Thousand Shares—Par \$100.

(CHARTERED BY THE STATE OF TENNESSEE.)

PRESIDENT.

B. B. SMALLEY, BURLINGTON, VT., President of the Ogdensburg & Lake Champlain Railroad Company.

VICE-PRESIDENTS.

W. P. RICE, FORT PAYNE, ALA.

HENRY C. YOUNG, CARDIFF, TENN., of Cordley & Co., Bankers, Boston, Mass.

GENERAL MANAGER, - - - M. M. DUNCAN.

DIRECTORS.

THE PRESIDENT & VICE-PRESIDENTS, Ex Officio.

JOSHUA L. CHAMBERLAIN, NEW YORK CITY, N. Y., Ex-Governor of Maine and President of Bowdoin College; Ex-President of the Association of the Army of the Potomac.

WILLIAM WARNER, KANSAS CITY, MO., of Warner, Dean & Hagerman, Counsellors-at-Law; Ex-Member of Congress from Missouri, and Commander-in-Chief of the Grand Army of the Republic.

SAMUEL E. PINGREE, HARTFORD, VT., Ex-Governor of Vermont; Chairman of the Board of Railroad Commissioners of Vermont.

CHARLES L. JAMES, BOSTON, MASS., of James & Abbot, Lumber.

T. G. MONTAGUE, CHATTANOOGA, TENN., President of the First National Bank of Chattanooga; Director of the Roane Iron Co.

ROBERT PRITCHARD, CHATTANOOGA, TENN., of Pritchard, Sizer & Thomas, Counsellors-at-Law.

J. F. TARWATER, ROCKWOOD, TENN., of Tarwater & Brown, Iron Miners.

J. M. FORD, KANSAS CITY, MO., President of the Fort Payne, Ala., Furnace Co., and of the First National Bank of Denison, Texas.

CARLOS HEARD, BIDDEFORD, ME., Merchant.

JOHN M. WHIPPLE, CLAREMONT, N. H.

FISCAL AGENTS IN THE NORTH.

CORDLEY & CO., BANKERS, 121 Devonshire Street, Boston, Mass.

BANKERS IN THE SOUTH.

FIRST NATIONAL BANK OF CHATTANOOGA, TENN.

TRANSFER AGENTS.

AMERICAN LOAN & TRUST COMPANY, BOSTON, MASS.

THE CARDIFF COAL & IRON COMPANY, at a public sale held April 22d to 24th sold over one million dollars' worth of business and residence property to investors, who will build on and improve the same at once. The prices were conservative and maintained within the limits of actual value. The proceeds of this sale, together with the sum to be contributed by the Cardiff Coal & Iron Company from the sale of its treasury stock, gives the management two million dollars, all of which will be expended in building up the town. The place does not exist that can approximate the inducements that this city now offers to every class of industry and manufacture.

SITUATED IN A HEALTHY CLIMATE,

SUPPLIED WITH PURE WATER,

EXCELLENT TRANSPORTATION FACILITIES,

In the Heart of the Great Iron and Coal Belt of Tennessee,

Surrounded by a rich agricultural community, with every class of business sustained by the demands of the country, Cardiff will furnish to the Manufacturer, the Merchant, the Banker, the Professional Man, the Farmer, the Miner, the Laborer all that reason demands.

Financial Encouragement will be Given Every Class of Business.

The Cardiff town site contains over 3,000 acres. The building of Cardiff is in charge of men of approved judgment and experience. The town will be developed by the erection of Iron Furnaces, Coke Ovens, Hotel, Water Works, Motor Line, Electric Lights, Manufacturing Plants, Public Buildings.

MIDDLESBOROUGH,

KENTUCKY.

There Are Now Under Contract:

A Basic Steel and Iron Plant, daily capacity 300 tons, to cost \$1,000,000 and to employ about 1,000 hands.
 An Iron Rod Mill; A Sheet Mill; A Nail Mill.
 Two Coke Iron Furnaces, 150 tons daily capacity each, and one Charcoal Furnace.
 A \$500,000 Tannery—the largest in the world
 Fourteen Coal Mining Enterprises, to employ about \$2,000,000 capital.
 A Dozen Wood-Working Enterprises.
 A Twelve-Mile Belt Railroad.
 Tile Works, Fire and Building Brick Works, and a dozen or more other enterprises.

\$18,500,000

Already Invested in the Development of Middlesborough.

Since the above announcement was made, Mr. A. A. Arthur, the manager of the company, has returned from London, where he secured an additional **\$8,000,000** to be invested in Middlesborough enterprises.

The capital of the Water Works Company has been increased from \$200,000 to \$750,000.

The capital of the Electric Street Railway Company has been enlarged to \$250,000 and the proposed lines extended so as to cover all the principal streets.

The length of the Belt Railroad has been increased to 20 miles, and the whole line will be in operation in a few weeks.

The money has also been secured for an extension of the Knoxville, Cumberland Gap & Louisville Railroad through the tunnel into Middlesborough. There is now under negotiation a lease of railway systems, of which the Knoxville, Cumberland Gap & Louisville road will form a link, giving Middlesborough trunk line connection with Chicago, Cincinnati, Louisville, Atlanta, Charleston, Savannah and Pensacola. Arrangements are also being made for direct connection between Cumberland Gap and some point on the Atlantic coast, and following this will be the establishment of a line of steamers between that point and Liverpool.

\$400,000 has been secured for the Middlesborough Coal and Iron Bank, which is now a regular department of the American Association's business.

The entire capital of the Cumberland Gap Park Company, \$1,800,000, has been secured in London. Contracts

have been let for the magnificent hotel, casino, sanitarium and other buildings.

The Middlesborough Hotel Company's capital has been increased. The company is now making an addition to its present building at a cost of \$25,000. Contract has been let for new hotel with ball room, casino and all the attractions and appointments of a first-class house, to cost \$75,000.

Contract has just been made for a new office building for the American Association, to be of stone and to cost \$35,000. A new office building will also be put up for the Middlesborough Town Company, the material to be stone and brick.

The Ousiotto Building Company, with a capital of \$250,000; the Manchester Building Company \$200,000; the St. Helen's Building Company \$200,000, and the New South Building and Loan Company with \$100,000, have been organized.

The eminent engineer, Mr. George E. Waring, Jr., of Newport, R. I., has been given the superintendency of contracts for a system of sewerage for Middlesborough and for the continuation of the work of straightening the stream that flows through Middlesborough. These improvements will cost \$150,000.

Mr. Arthur completed plans for a residence town at Cumberland Gap in connection with the American Association's developments. The amount secured for this purpose was \$750,000. The laying out of these lands has been given to Mr. George E. Waring, Jr.

The Watts London Iron and Steel Syndicate will increase its capital to £1,500,000 (\$7,500,000) and build other industries in addition to those already announced. Of the two furnaces now building the first will blow in early next October, and the second in November. Two other furnaces will be let to contract January 1.

Parties from Manchester, London and Liverpool will attend the May auction sales at Middlesborough, and will come with \$500,000 to invest in Middlesborough lots. Other parties are coming to form subsidiary companies to operate at Middlesborough in addition to those enumerated above.

The Northern American Association has been formed with a capital of \$3,750,000 to develop 200,000 acres of Kentucky coal lands; also the Anglo-American Association, with capital of \$2,000,000, to develop 80,000 acres of Kentucky coal lands, and the Western American Association, with capital of \$3,000,000, to develop 150,000 acres of coal and iron lands in Tennessee.

Counting the new enterprises arranged for on this trip and the additions to the capital of such as had been already announced, Mr. Arthur has secured nearly \$8,000,000 to be invested at Cumberland Gap. This is **\$8,000,000 of new money to be added to the millions already invested.**

Thus the Amount of Capital now Invested in the Development of Middlesborough reaches

\$26,500,000.

Besides this, the three coal and iron companies mentioned above, whose aggregate capital is **\$8,750,000**, are closely allied to the American Association and the Middlesborough Town Company, and their developments will be made to contribute to the growth of Middlesborough.

The history of the world does not show an instance of

such amazing development in so short a time, and on so sure and solid and permanent a foundation.

A year ago the population of the present site of Middlesborough did not exceed 50; to-day the town has a population exceeding 5,000. It is a conservative estimate to say that in three years 50,000 people will be living here.

MIDDLESBOROUGH TOWN CO., Middlesborough, Ky.

FACTS ABOUT FLORENCE.

LOCATION.

Florence is in North Alabama, near the Tennessee line, on the Tennessee river, which is navigable here for large steamers. It is on the Memphis & Charleston Railroad, and the Nashville & Florence branch of the Louisville & Nashville Road.

AGGREGATE OF ADVANTAGES.

There are many places in the South possessing the advantages of a good climate, healthfulness, natural resources and manufacturing capabilities more happily combined and in a higher degree than can be found in any other part of the country. It is believed, however, that at no point in the South, and hence nowhere in America can there be found an aggregate of so many unsurpassed advantages and attractions as exist at Florence.

IRON AND COTTON MANUFACTURING.

Florence can make iron as cheaply as any place in Alabama. It has facilities for the manufacture also of cotton goods equal to those of any other place. Anything that uses wood as a raw material can be made here at as low a cost as anywhere in the South.

Thousands of acres of iron ore of a high grade within a few miles of Florence are owned by Florence companies. Limestone is quarried within the town limits. There is enough of it to last for ages.

Cotton mills would get a large part of their supply from the country around Florence. Cypress creek furnishes water power and mill sites enough to make Florence the Lowell of the South.

North of Florence, and up the Tennessee river, there are large areas of timber, embracing a wide variety of hardwoods—forests that the axe has never touched.

COMMERCIAL AND AGRICULTURAL FACILITIES.

Besides its industrial possibilities, Florence is a point of great commercial importance, and is becoming the center of an extensive mercantile business. It has the advantage of both rail and river transportation and of competing railroads. Several additional railroads are now under construction to open up new trade connections to Florence.

Florence is surrounded by a wide extent of fertile and productive country, as well adapted for farming, stock raising, fruit growing, truck farming, dairying, &c., as any in the world. Further, it has a climate that is delightful the year round. Its health record cannot be surpassed. It has no malaria. In fact, people who live here enjoy a remarkable exemption from ailments of every sort. It has an abundance of the purest water.

BEAUTY OF LOCATION.

For beauty of location Florence is without a peer. The Tennessee river at this point is as romantic and beautiful as the Hudson. The rolling character of the country, the slopes and hills and alternating valleys furnish a picture to charm an artist's eye. The lovely Cypress creek, a deep and rapid stream emptying into the river just below the town, presents at every turn in its tortuous course a scene of entrancing beauty. The views from some of the higher hills are as fair as the eyes of man ever rested on.

Limited space allows here only the briefest summary of a very few of the more important facts about Florence. For more detailed information write to either one of the following companies. Or better still, come down and see for yourself. Investigation is all that Florence asks or needs.

GROWTH.

Florence is making more rapid progress, proportionately, than any other town in America. This is a strong statement but it is true. And its growth is on a solid and permanent basis.

SOLID GROWTH.

Florence is not undergoing any wild real estate boom. Its managers are not seeking to advance real estate prices. It is not their plan to get a quick return for the money they have invested, by the rapid sale of lots at unnatural prices. It is their aim to first build up a town, to locate factories and secure a permanent population, when land will have an actual value and sell at prices from which there will not be a subsequent disastrous reaction. At present real estate is much lower in price than in any other town in the South that has made half the progress Florence has made.

THIRTY NEW ENTERPRISES.

Within the last 12 or 15 months over 30 new industrial enterprises have been located at Florence, with an aggregate cash capital of about \$5,000,000. This remarkable growth is the result of efforts to induce people to simply investigate the attractions of Florence. Investigation and comparison with other places, on the part of any who are looking for a place in the South to locate, will in nearly every case result in the selection of Florence.

INDUSTRIAL ENTERPRISES IN OPERATION.

The following are some of the industries in Florence. Some of these are in operation; others are nearly ready for work and others have but recently commenced work on their buildings: One of the largest and best furnaces in the United States now in blast, and another under construction; a stove factory; a hardware company, with a capital of \$300,000, manufacturing fine building hardware, &c., the only factory of the kind in the South; a wagon factory, with capital of \$150,000; agricultural implement works; handle factory; woodenware factory; sash, door and blind factories; a cedar bucket factory; a pump factory; planing mills; a factory to make wooden butter plates such as grocers use; a flour mill; a cotton mill in operation, and a \$500,000 mill building and others projected; a jeans factory; a gingham factory; a woolen mill; a cotton gin; a marble company; a roofing and paint company; a shoe factory; a suspender factory; a compress, packet and ferry company; building and loan companies; a canning factory; brick factories; a dummy railroad company, and a number of other enterprises.

\$15,000,000 INVESTED.

The aggregate capital of the industrial, mercantile and development enterprises in Florence exceeds \$15,000,000.

A year ago the population of Florence was 2,000. It is now about 10,000.

There are more than 1,000 carpenters at work in Florence but they can't build houses fast enough to keep up with the increase in population.

INVESTIGATION AND INVESTMENT.

A number of the foremost capitalists and iron and cotton manufacturers, and others, of Philadelphia, Boston and other Eastern cities, after a thorough personal investigation, have just made heavy investments aggregating several million dollars in Florence.

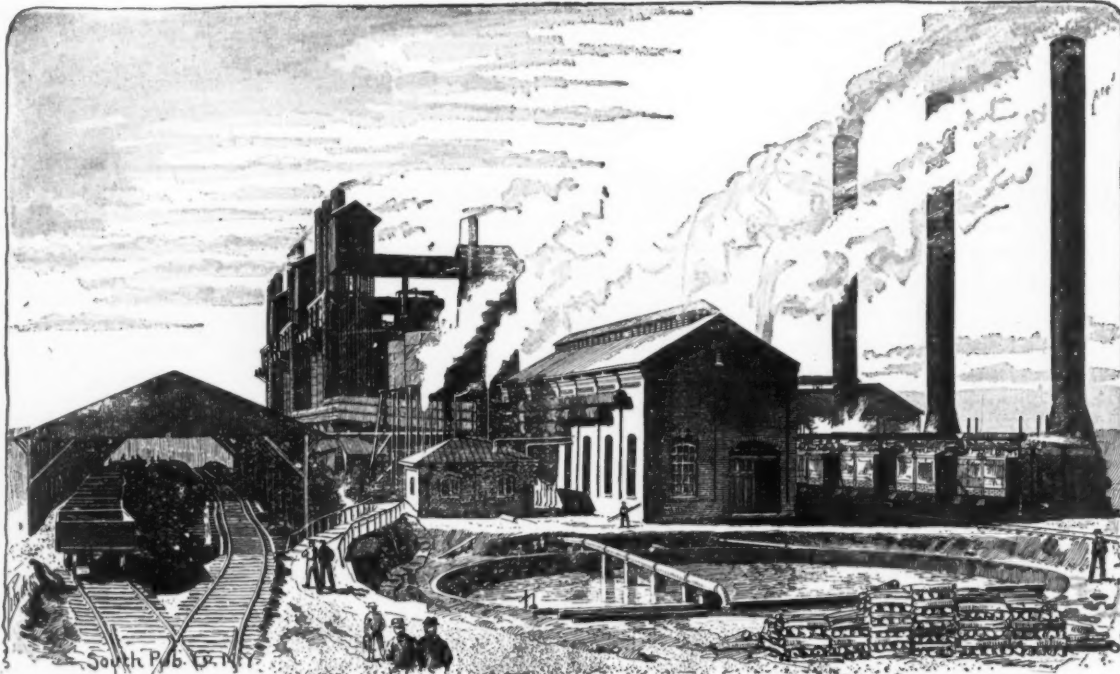
Lauderdale Manufacturing Co. Florence Cotton and Iron Co.
Florence Investment Co.

Florence Railroad and Improvement Co.

} Florence, Ala.

SHEFFIELD, ALA.

THE SUPERB.



At the Headwaters of Deep Navigation on the Tennessee River, the Hudson of the South.

The Largest Producer of HIGH-GRADE Pig Iron of any City in the Entire Industrial South.

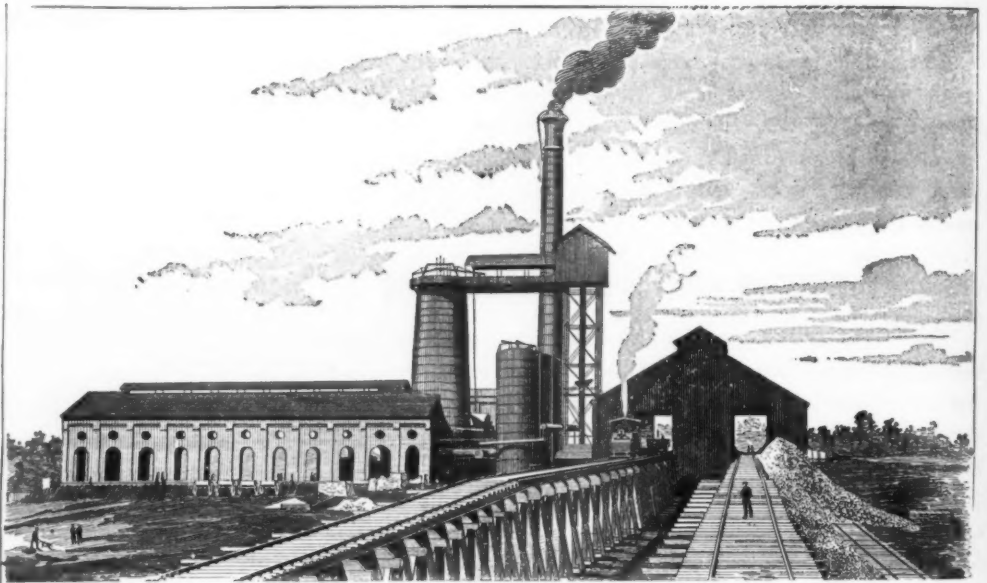
The only point in the South that has or can ship pig iron to the cities on the Mississippi, Missouri and Ohio rivers by boat or barge without rehandling. This last shipment of 5,000 tons of Pig Iron to Pittsburgh, Pa., by barge was made at a saving of \$2.65 per ton over what any iron-producing city of the South has done or can do to-day.

Five Large Blast Furnaces

Capacity 750 tons pig iron per day.

The following are among the corporate and private enterprises that belong to Sheffield:

The Sheffield Land, Iron & Coal Co., capital \$1,000,000.
 The Sheffield & Birmingham Coal, Iron & Railroad Co., capital \$1,000,000; the owners of three 150-ton blast furnaces.
 The Birm., Sheffield & Tenn. River Railway Co., capital \$5,000,000.
 The Hattie Ensley Furnace, capital \$200,000.
 The Lady Ensley Furnace Co., capital \$200,000.
 The Electric Light & Gas Fuel Works, \$50,000.
 The Sheffield Ice Co., capital \$25,000.
 The Sheffield Manufacturing & Constructing Co., \$30,000.
 The Sheffield Contracting Co., \$60,000.
 The Eureka Brick & Lumber Co., \$30,000.
 The Howard Brick Co.
 The Sheffield Bakery & Bottling Works.
 The Sheffield Mineral Paint Co., capital \$50,000.
 The Sheffield Agricultural Works, capital \$40,000.
 The Sheffield Cotton Compress Co., \$50,000.
 Millan Brothers, Steam Laundry.
 Enterprise Publishing Co.
 Water Works, already expended, \$30,000.
 Sheffield Street Railway Co., capital \$100,000.
 Cleveland Hotel Co., capital \$50,000.
 Sheffield Hotel Co., capital \$120,000.
 Bank of Commerce, capital \$150,000.
 East Sheffield Land Co., capital \$500,000.
 Hull & Keller's Fern Quarries.
 Mobile Real Estate Co., capital \$50,000.
 Sheffield Real Estate Co., capital \$50,000.
 Sheffield & Mobile Improvement Co., capital \$100,000.
 Sheffield Stove Works.
 Henderson Milling Co., capital \$100,000.
 Globe Iron & Brass Works, capital \$10,000.
 Standard Machine Shop & Foundry, capital \$50,000.
 Owen Pink Mixture Co., capital \$100,000.
 Bell Telephone & Telegraph Co.
 Foulds' Shoe Factory, capital \$20,000.
 Enterprise Wood Working Co., capital \$30,000.
 Buchanan Straw Goods Factory, \$25,000.
 The Sheffield Harness & Saddlery Co., capital \$20,000.
 Principal Shops of the Sheffield & Birmingham Railroad.
 Principal Shops Memphis & Charleston Railroad, now being built.



Aside from the foregoing the following are in course of construction and may be considered positive: Principal Shops of the Memphis & Charleston Railroad; Principal shops of the Nashville, Florence & Sheffield Division of the Louisville & Nashville Railroad. Reasonably certain to be secured in the near future are the following, in regard to which negotiations are pending: A Rolling Mill; Large Machine Shop; A Cotton Mill.

ALABAMA'S IRON CITY.

The Superb Location at the head of navigation on the Tennessee River, commanding the outlet to immense fields of IRON ORE and COAL and magnificent tracts of the finest Timber. Has already attracted to the spot where three years ago in a cotton field her projectors set the stakes of a new city, capital and people, unequaled in amount and number, circumstances considered, by any of the so-called new cities of the South.

With eight Church Organizations, two Free Public Schools, Postoffice, Telegraph and Express offices and abundant facilities of transportation by river and rail. It has every advantage as a residence city that can be desired.

Good Water; Drainage Excellent; Health and Climate Unsurpassed. Free Public Schools and Churches. Splendid opening for men of push and energy. No better point for profitable investment. No "Old Foggy" element here.

Sites for Manufacturing Enterprises

And for Free Public Schools and Churches

Donated by the Sheffield Land, Iron & Coal Company.

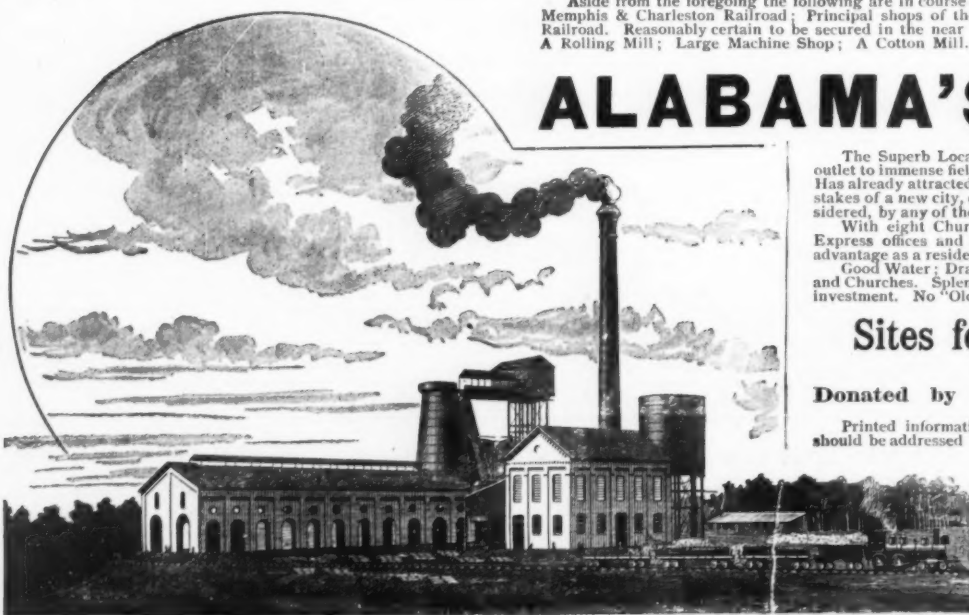
Printed information furnished on request. Correspondence solicited. Communications should be addressed

W. L. CHAMBERS,

Vice-President and Manager.

Sheffield Land, Iron & Coal Company,

SHEFFIELD, ALABAMA



The Staunton Development Co.

OF STAUNTON, VIRGINIA.

Authorized Capital \$2,000,000.

Shares \$100 par value each.

OFFICERS

M. ERSKINE MILLER, President, Staunton, Va.

S. M. YOST, Vice-President, Staunton, Va.

W. P. TAMS, Treasurer, Staunton, Va.

W. J. PERRY, Secretary, Staunton, Va.

DIRECTORS.

ISAAC WITZ, Staunton, Va.

B. F. EAKLE, Staunton, Va.

JOHN McQUAIDE, Staunton, Va.

ANDREW BOWLING, Staunton, Va.

S. M. YOST, Staunton, Va.

JED HOTCHKISS, Staunton, Va.

J. H. WAYT, Staunton, Va.

M. ERSKINE MILLER, Staunton, Va.

O. K. LAPHAM, Chicago, Ill.

H. H. FAY, Capitalist, 28 State Street,
Boston, Mass.

W. L. FLEMING, Richmond, Va.

GEORGE H. HULL, President American
Pig Iron Storage Warrant Company, 44
Wall Street, New York.

STAUNTON, VIRGINIA.

The Queen City of the Valley of Virginia.
Present Population 12,000.

Situated in Augusta county at the crossing of the Baltimore & Ohio and Chesapeake & Ohio railroads and accessible to the great coal and coke fields, namely: Connellsville, by the Baltimore & Ohio; Pocahontas or Flat Top by the Norfolk & Western and Chesapeake & Ohio, and New River Coke Fields by the Chesapeake & Ohio.

PROPERTY.

The lands acquired, aggregating 2,242 acres, more or less, are favorably situated within the city limits and adjoining the corporation lines, and it might be fairly said that about 240 acres are situated within the city of Staunton. The great bulk of the property lies between the Valley Railroad or Baltimore & Ohio Railroad and the Chesapeake & Ohio Railway, and is most admirably situated for railroad switches and side tracks to reach manufacturing enterprises. Several streams of good water run through the lands, affording abundant water supply for factories and fine drainage.

CAPITAL STOCK.

The authorized capital is two million dollars. One million, two hundred thousand dollars of stock will now be issued,

of which \$204,800 has been disposed of, leaving \$800,000 of stock in the treasury, to be hereafter issued, if it should be deemed wise to do so.

Subscribers will bear in mind that with every two shares of stock they will be entitled to either a business or residence lot, to be determined by a drawing at a date to be hereafter designated.

BOOKS OF SUBSCRIPTION NOW OPEN.

Staunton is within six hours' ride from Washington, seven of Baltimore, nine of Philadelphia and eleven of New York.

It has an excellent system of water works, paid fire department, electric light and gas companies, ice factory, street car line under construction, four newspapers, handsome opera house, commercial college and other important industries that contribute to the welfare of the city.

GLASGOW, —————→ ←————— VIRGINIA.

The Grandest Enterprise of the New South.

THE LOCATION

is naturally fine and adapted to the construction of a large city.

THE CLIMATE

guarantees immunity against epidemics.

WATER-POWER

is practically unlimited.

IRON ORE

in abundance and of fine quality.

LIMESTONE

near at hand and plentiful.

CEMENT

extensive deposits of good quality.

GLASS SANDS

in large quantities and of high grade.

TIMBER

of various kinds and abundant.

FUEL SUPPLY

Pocahontas and New River Coke in convenient proximity.

TRANSPORTATION FACILITIES

Two trunk lines—Norfolk & Western, with its Shenandoah Valley Railroad connection, and the Chesapeake & Ohio—giving direct communication with fields of finest Coaking and Steam Coals in the country, with deep water transportation with Norfolk & Newport News, with the West via Cincinnati.

THE PITTSBURG & VIRGINIA R. R.

to be built in the near future will go through the Blue Ridge mountains at this point.

FACILITIES FOR MANUFACTURING

unexcelled by those offered by any locality in the South.

ADDRESS

ROCKBRIDGE COMPANY,

Ex-Gov. FITZHUGH LEE,

President

Hon. WM. A. ANDERSON,

Vice-President.

M. M. MARTIN,

General Manager.

DENISON, TEXAS.

The "QUEEN" City of the Southwest,

— AND —

✻ GATEWAY ✻

— TO THE —

GREAT STATE OF TEXAS.

The City of Denison presents the Finest Opportunity of any City in the Southwest for the Investment of Capital in Large or Small Sums.

DENISON is situated in Northeastern Texas near inexhaustible beds of coal and iron, surrounded by the finest fruit lands in the world, and adjoining the INDIAN TERRITORY, which, in the nature of things, must in a few years be opened to settlement.

The growth of Denison has been a natural one, the city having reached its present size—16,800 population—in sixteen years.

The city is regularly and beautifully laid out. Railroads run from it in four different directions. The Missouri, Kansas & Texas alone does an enormous business, having 54 miles of switch track in Denison, employing 500 skilled workmen and disbursing \$150,000 a month in wages.

The first public school in the State was established here, and the city's elegant two and three story brick school buildings, surrounded by attractive grounds, are well arranged for the use of the white and colored children. Its schools are in session ten months in each year.

We have sixteen church societies, seven of which are colored.

The city is well supplied with pure water from its numerous private wells—dug in the ground—and its first-class system of water works, giving the citizens ample protection against serious loss by fire, and enabling the insurance companies to rate the city first class as to fire hazard. Rate of taxation low.

The city has four miles of street railway, and a six-mile motor railway; has two electric light companies and a telephone plant. It has an influential New England colony, and counts among its citizens people from every State in the Union.

A large hotel, to cost \$125,000, is to be erected here this year, and a large steel plant with \$2,000,000 of capital is contemplated.

30,000 bales of cotton were shipped from Denison in 1889. 200,000 baskets of strawber-

ries and several carloads of peaches and other fruits have been shipped to market this season.

The Denison Canning Co., capitalized at \$100,000, has one of the largest canning factories in the country.

A cotton mill company with a capital of \$500,000 is building a 25,000-spindle cotton mill.

The climate of Denison is magnificent, situated nearly 800 feet above sea level. In summer it is warm, but far cooler than many cities farther North, and from 6 P. M. until after sunrise it is always cool. The city is very healthy.

The capacity of the ice factory has been increased from a daily output of 15 tons to 30.

The Denison Land & Investment Co. is prepared to give every reasonable encouragement to manufacturers, and solicit correspondence from such manufacturers as contemplate coming into the Southwest to locate.

Address all communications to

THE DENISON LAND & INVESTMENT COMPANY, DENISON, TEXAS.

Paid-Up Capital, - - - - - \$1,200,000.

OFFICERS:

W. P. RICE, President.

MILTON H. FRENCH, Vice-President.

B. J. DERBY, General Manager.

ARTHUR L. BERRY, Secretary and Treasurer.

DIRECTORS:

W. P. RICE,
J. M. FORD,
SAM STAR,

Kansas City, Mo.
Kansas City, Mo.
Denison, Tex.

B. J. DERBY, Burlington, Vermont.
ARTHUR L. BERRY, Orford, N. H.
M. V. B. CHASE, Augusta, Maine.

MILTON H. FRENCH, Thomaston, Maine.
B. C. MURRAY, Denison, Texas.
JOS. B. LINCOLN, Boston, Mass.

WAYNESBORO, VA.

THE WAYNESBORO COMPANY.

LOCATION

In the famed Shenandoah Valley. Perfect for every class of business and residence.

CLIMATE AND HEALTH

All that could be desired. Free from rigor of North and enervation of the South. No epidemics. No malaria.

ORES

Iron in inexhaustible quantity and fine quality. Manganese—largest mine in America near at hand, and every evidence of much undeveloped, making this the center of the manganese belt of the country.

LIMESTONE

In massive beds close at hand and of best quality.

TIMBER

Of every species and very abundant. Tan bark in large quantities.

FUEL

Pocahuntas and New River coal and coke by short hauls.

WATER SUPPLY

Unsurpassed. Pure freestone. Mineral Waters adjacent.

HOTEL

To have every modern improvement and appointment and to cost \$25,000, will be let to contract within ten days.

TRANSPORTATION

Two competing trunk lines—Norfolk & Western system to all points North and South, the Chesapeake & Ohio to the great West and deep water at Norfolk and Newport News—affording direct communication with the three great coking fields of America. A third railroad to be built, giving facilities over the B. & O. System.

MANUFACTURING FACILITIES

Unexcelled by any locality in the South for profitable establishment of furnaces, steel plants, rolling mills, foundries, cotton mills, woolen mills, paper mills, tanneries, &c. Raw material for such industries abundant.

Special Inducements Offered to Parties Wishing to Locate Plants.

ERSKINE MILLER,

President.

T. H. ANTRIM,

Vice-President.

J. F. TEMPLETON,

Secretary and Treasurer.

TREDEGAR, ALA.

RICHEST AND MOST EXTENSIVE DEPOSITS OF
 **MANGANESE** 

Yet Discovered in the United States.

Propositions will be Considered Looking to
the Establishment of a Large Ferro-
Manganese Plant.

FOR PARTICULARS ADDRESS

GOLDSMITH BERNARD WEST,

General Manager,

TREDEGAR (Present Postoffice Jacksonville, Calhoun Co.), Alabama.

FOR SUCH INDUSTRIES AS

COTTON MILLS,
WOOLEN MILLS,
TANNERIES,
BOOT AND SHOE FACTORIES,
HARNESS AND SADDLE FACTORIES,
FURNITURE FACTORIES,
CARRIAGE AND WAGON FACTORIES,
FLOUR MILLS,
GRIST MILLS,
CRACKER FACTORIES,
CANNING FACTORIES,
COTTON SEED OIL MILLS,

DALLAS, TEX.

Is equal to any locality
in America in its
combined advantages of
**CHEAP AND
ABUNDANT
RAW MATERIAL
READY,
PROFITABLE
AND EXPANDING
MARKET.**
DISTRIBUTING FACILITIES,
ELIGIBLE SITES,
GOOD CLIMATE.

Any worthy industries
will be aided liberally by the

DALLAS MANUFACTURERS' AID & IMPROVEMENT CO.

711 Main Street, Dallas, Texas.

BEDFORD CITY LAND & IMPROVEMENT CO.

BEDFORD CITY, ^{LAT} LIBERTY, VA.

By special act of the Legislature of Virginia the Bedford City Land & Improvement Company was chartered with the most liberal grants of power. The company has been fully organized.

AUTHORIZED CAPITAL - - - \$1,000,000.

JAS. M. BERRY, (of Berry Bros., Tobacconists,) **President.**
R. B. CLAYTOR, (of R. B. Claytor & Co., Merchants) **Vice-President.**
J. LAWRENCE CAMPBELL, (of Burks & Campbell, Attorneys-at-Law,) **Secretary.**
S. M. BOLLING, (of Bolling, Wright & Co., Tobacconists,) **Treasurer.**

BOARD OF DIRECTORS:

MARTIN P. BURKS,	R. B. CLAYTOR,	J. M. BERRY,
C. W. WHARTON,	J. LAWRENCE CAMPBELL,	T. D. BERRY,
S. M. BOLLING,	SAMUEL GRIFFIN,	W. W. BERRY,
DR. W. W. SMITH, President of Randolph-Macon College,		
REV. A. E. DICKINSON, D. D., Editor of the Religious Herald, Richmond, Va.		

The Company is solvent and its business is conducted on the soundest business principles. It is not engaged in wild booming.

Only \$300,000 worth of stock has been offered to the public.

The Company owns nearly 800 acres, containing the best residence, business and manufacturing sites. The stock which is offered is in ten-dollar shares, payable \$2 per share cash when subscribed, \$1 each thirty days thereafter, until \$5 is paid on the share. For this the Company issues paid up non-assessable certificates of stock. The money thus raised is to be applied to the improvement of the property.

Bedford City is not an old field, but a thrifty, growing community, in the most healthful and beautiful mountain region in Virginia.

Mean yearly temperature 53.7; Winter, 44; Summer, 78.

A few miles from the peaks of Otter, it would be difficult to exaggerate the exquisite beauty of the scenery and the tonic quality of the atmosphere. Within a days ride of Boston, New York, Philadelphia, and a few hours from Baltimore, it presents unusual advantages for health seekers.

The present population is nearly 4,000. There are 30 manufacturing enterprises, large and small, in operation, and 10 new secured with capital provided, which go into work as soon as buildings can be put up and the plants erected.

On the Company's lands are the elegant Randolph-Macon Academy, the largest school for boys in the South, and the Jeter Memorial Institute for young ladies, which will be commenced within six months. The Norfolk & Western R. R. Co. will build a fine passenger depot near a first-class hotel, to cost \$75,000. Poindexter, the architect of the Academy, is now preparing plans.

The Bedford City Company offers the most beautiful residence sites in the western part of the town, in which direction it is rapidly building.

This is the safest and best investment offered anywhere in Virginia. It is a golden opportunity to get property in a splendid section, as rich in minerals as it is healthful and magnificent in the grandeur of its mountains.

A new railroad from Glasgow to Atlanta will be built. Its construction will begin this year. For further particulars address

J. M. BERRY. President of Bedford City Land & Improvement Co., Bedford City, Va.

The North Carolina Steel & Iron Co.

GREENSBORO, N. C.

OFFICERS.

President,	JAMES A. ODELL.
Vice-President,	JULIAN S. CARR.
General Manager,	J. J. NEWMAN.
Treasurer,	SAM'L H. WILEY.
Attorney,	THEO. F. KLUTTZ.
Secretary,	CHAS. D. BENBOW.
Financial Agent,	ROBT. T. GRAY.

Executive and Finance Committee.

J. A. ODELL,	D. W. C. BENBOW,	J. A. GRAY.
--------------	------------------	-------------

DIRECTORS.

A. B. ANDREWS, Second Vice-President R. & D. R. R. Company, Raleigh, N. C.	THEO. F. KLUTTZ, Attorney at Law and President Yadkin R. R. Company, Salisbury, N. C.
JAMES A. ODELL, President Odell Hardware Co., Greensboro, N. C.	JULIAN S. CARR, President Blackwell's Durham Co operative Tobacco Company, Durham, N. C.
JULIUS A. GRAY, President Cape Fear & Yadkin Valley R. R. Company, Greensboro, N. C.	D. W. C. BENBOW, Greensboro, N. C.
	ROBT. T. GRAY, Attorney at Law, Raleigh, N. C.

This company owns the famous "Ore Hill" property in Chatham County, N. C., that has been noted as an iron property for more than a century. Ores from it were used in the manufacture of iron during the revolutionary war. During the late civil war the Confederate government selected this locality as the site of large iron and ordinance works, because of the exceptionally high grade of its ores.

The lack of railroad facilities has made impossible, hitherto, the profitable utilization of these ores on any large scale. The locality is now, however, made accessible by the Cape Fear and Yadkin Valley Railroad, which passes through the property.

Some of the most noted iron men in America have examined and reported on these ores, and so far as the directors of this company know, there has never been an expert report on it that was not highly favorable.

Prof. Charles D. Wilber, inspector of mines and mineral lands, formerly State Geologist of Illinois, and geologist and mining expert for the Northern Pacific Railroad, visited Ore Hill in 1884.

Extracts from his report and the opinions of Dr. E. Emmons, formerly State geologist of North Carolina, Prof. W. C. Kerr, State geologist, Prof. F. A. Genth, of Philadelphia, S. A. Richards, formerly Superintendent of Furnaces for the Joliet Steel Company, Mr. Thomas Graham, a prominent iron manufacturer of Philadelphia, and others, are published in the company's prospectus.

The Manufacturers' Record, of Baltimore, having learned of the proposed organization of this company, investigated, on its own account, the Ore Hill tract. The report of its expert, Mr. Thomas P. Williams, M. E., is also given in the prospectus.

The company recently employed Mr. Frederick H. Smith, of Baltimore, a noted mining engineer and mineralogist to examine the property. His report confirmed all that had been claimed, and he advised the company to build the furnaces. Mr. Smith is a man of such eminence in his profession that it would be superfluous to make any mention of the value of his report. He is a member of the American Society of Civil Engineers, a member of the American Institute of Mining Engineers, and an Associate of the American Institute of Electrical Engineers.

Coke for the furnaces will be brought from Pocahontas, 245 miles, by the Norfolk & Western and Cape Fear & Yadkin Valley Railroads, which will connect at the State line near Mt. Airy, N. C.

In the organization of the company its projectors had in view:

1st. The building of furnaces for the manufacture of iron and steel, and ultimately the building of rolling mills and other industries for the utilization of the product of the furnaces.

2nd. The acquisition of a considerable area of land around the locality that might be selected as the site of the furnaces, in order that the company might itself enjoy the results of its own work, by getting the benefit of the increase in real estate values that would follow the establishment of furnaces and other industries.

3d. The inauguration of a general development and town building enterprise, starting with an attempt to secure the location on its property of iron, wood, textile and other industries, thus bringing together an aggregation of factories and stores, and a continually increasing population, with the resulting need for land for business and residence purposes.

LOCATION OF WORKS.

The Company, after much deliberation, fixed upon Greensboro as being by far the most desirable place for the location of its works. It was selected because of its central location, its important railroad connections, its equable climate and remarkable healthfulness, its thrifty, enterprising and progressive spirit, and its unsurpassed advantages for general manufacturing. It is on the main line of the Richmond & Danville system, one of the greatest North and South lines. It is on the Cape Fear & Yadkin Valley Road, which, with the recent completion of its extension from Fayetteville to Wilmington, and the connection to be made next year at the State line near Mt. Airy, with the Norfolk & Western, will be an East and West trunk line, furnishing connection with the West, and a tidewater outlet. Another outlet to the sea will be afforded by the road the Richmond & Danville Company

is now building from Raleigh to Norfolk. The Winston and Wilkesboro branches of the Richmond & Danville, penetrating the Bessemer ores of Western North Carolina, have their starting point at Greensboro. Southeast of Greensboro are hundreds of thousands of acres of magnificent timber, uncultured, long-leaf pine and several varieties of hardwood.

With the impetus given it by this enterprise and with its advantages for iron and steel making and the manufacture of products using these as raw material, its advantages for woodworking shops of every sort, for textile industries and for manufacturing in general, together with its attractions as a place of residence, Greensboro ought to become one of the most important centers of industry in the South, the industrial and commercial metropolis of North Carolina.

TOWN SITE PROPERTY.

Before announcing its purpose the Company, through its agents, secured options on about 2,500 acres of very desirable property adjacent to Greensboro, some of it being within the corporate limits, and the whole of it being in an almost solid body. About 1,500 acres have already been purchased, and the remainder is being taken up as the options expire. The whole of it has been secured at an average price of \$25.00 an acre. This is no more than has been paid for the town site lands on which most of the industrial towns of the South have been built up, and in comparison with which this has the immeasurable advantages of extensive railroad connections and facilities unexcelled by any of them, an attractive, progressive town of 7,000 people to start with. Water works, gas works, electric light works, paved streets, churches and schools, elegant houses, an established society, and all the attractions that pertain to an old community.

EXTRACT FROM MR. SMITH'S REPORT.

"The city now containing 7,500 people, is at the crossing point of three railroad systems, giving inlet and outlet from and to six different directions, and with other lines in prospect. The Cape Fear & Yadkin Valley Road passes through iron bearing formations from Sanford, through Greensboro to Mt. Airy. The North Carolina Road is in iron bearing formations from near Durham through Greensboro to Wilkesboro, and is to be extended through Cranberry Iron Gap at an early day, while the main Richmond & Danville Road is in sight of mineral formations from Lynchburg, through Greensboro to Charlotte and King's Mountain, and via Salisbury to the Blue Ridge and French Broad iron ores.

The local features are such that a short belt railroad line will economically connect all the railroad systems throughout your Company's lands and afford access from all directions to the properties which are most admirably located for the building up of industrial enterprises.

With the iron ores in all directions, and the Deep River coal so near, and the Pocahontas and other Virginia coals and ores so soon to be reached via Mt. Airy and the Cripple Creek branch of the Norfolk & Western, and the early connection with Roanoke, I recommend the early construction of two furnaces of about seventy-five tons daily capacity at Greensboro, to be followed up by rolling mills, converter and other plant for utilizing the product of the furnaces. I suggest two furnaces because there is a large amount of ore within reach which will output better results if smelted for iron than for steel, while the other ores will make steel pig.

The rolling mill should be made heavy enough to roll steel, and the housings and power will thus easily cover rolls for larger sizes of iron.

Foundries and machine shops to further utilize the iron and steel products should come with the furnace and mill, and then car shops and other enterprises to use the iron in connection with the fine timber regions to which Greensboro has such easy and cheap access. Greensboro is the best converging point for a large territory that is rich in iron ores, coal and timber, and if these resources are properly availed of, there is a large development in sight."

LAND SALES.

Judging from the experience of other development enterprises, it would seem to be within a reasonable and conservative limit to expect within two years to realize from sales of lots, covering a comparatively small part of the total area of land purchased, an aggregate sum equal to the capital stock of the company. This, when added to the expected profit from this company's furnaces and other works, makes the opening for the investment of capital one of the most inviting that has been presented to the public since the beginning of the present industrial era in the South.

The company will build at once two furnaces, one to make Bessemer iron and the other mill and foundry iron.

ANALYSES OF ORES.

	Metallic Iron.	Phosphorus.
Prof. W. C. Kerr's report.	57.41	none
" " "	58.67	none
Dr. O. D. Allen.	59.62	.224
" " "	54.90	none
" " "	57.12	none
" " "	53.74	none
Crane Iron Company.	51.35	.219
Booth, Garrett & Blair.	53.15	1.531
" " "	56.90	.219
" " "	56.17	.430
S. A. Richards.	59.90	.038
" " "	67.48	none
" " "	68.74	none
Prof. F. A. Genth.	57.68	none
" " "	59.03	none
" " "	67.60	none
" " "	57.12	none
" " "	54.80	.276
H. B. Nye.	58.90	.038
Frederick H. Smith.	53.20	0.408
" " "	49	.037
" " "	60.48	.05

THE CAPITAL STOCK OF THE COMPANY IS \$1,000,000.

Subscriptions have already been received for about \$300,000 at par. None of the stock will be sold at less than par. The proceeds will go into the treasury to be used for development purposes with a view to making valuable the company's lands.

It is probable that when one-half the stock (\$500,000) has been subscribed for, the books will be closed until after the first land sale.

For particulars as to time of payment, &c., address the company at Greensboro, N. C.

GRAHAM, VA.

~*~ Tazewell County. ~*~

THE FAVORED SECTION.

The Graham Land & Improvement Company.

OFFICERS.

E. A. DENNISTON, - - - - - President.
EDWARD ILSLEY, - - - - - Vice-President.
E. J. COLLINS, - - - - - Secretary and Treasurer.

DIRECTORS.

A. J. MAY, Tazewell C. H., Va. THOS. GRAHAM, Philadelphia Pa.
C. M. CLARK, Philadelphia, Pa. J. B. GREEVER, Graham, Va.
J. D. SERGEANT, Philadelphia, Pa. J. H. DINGEE, Philadelphia, Pa.
H. M. SILL, Philadelphia, Pa.

R. K. WRIGHT, JR., Agent, Graham, Va.

The Graham Land & Improvement Company has purchased about 900 acres of land, including the old town of Graham, at the junction of the Clinch Valley & Ohio extension of the Norfolk & Western railroad, in Tazewell county, Va., and has improved the property by laying it out in lots and streets. Several of the streets have been graded and macadamized. The work of macadamizing is being continued with great activity.

The land is so situated, being at the junction of two important branches of the Norfolk & Western Railroad, with the Bluestone river running through it, and in close proximity to the Pocahontas coal fields—the finest coking coal in the world—and the iron ore deposits of the Clinch Valley, that it will in a short period become an important iron manufacturing center as well as a distributing point for the entire coal field.

The Clinch Valley & Ohio extension of the Norfolk & Western Railroad runs through a section of country heavily covered with poplar, white and chestnut oak timber, and it is believed that Graham, at the junction of these two branches, is a most desirable location for the establishment of saw mills, tanneries, pulp mills and other woodworking establishments.

The company proposes to donate sites to all worthy manufacturing enterprises, and stands ready to take a limited amount of their stock.

The Following Desirable Industries have been Already Secured:

The Graham Furnace Company, with a capital of \$250,000, has under construction an iron furnace, dimensions 16x70 feet, with a capacity of about 100 tons per day, and expects to be in blast by November 1st.

The Virginia Lumber Company, with a capital of \$50,000, are erecting their buildings and will be in operation by the 1st of May.

Arrangements are also being made with parties who propose building at once a large general supply store and warehouse, building to cost about \$10,000, and having a working capital of not less than \$50,000.

The Graham Transparent Ice Company has been organized with a capital of \$50,000. Part of the machinery is now on the ground.

A large furniture factory has been organized with a capital of \$50,000.

Mr. Thomas B. Graham has secured a site on which he will erect a flouring mill with a capacity of thirty-five barrels, and expects to be in operation within sixty days.

The Graham Land & Improvement Company have made arrangements to supply the new town with water. The capacity may be extended to 2,500,000 gallons.

The Furnace Company has contracted to put in an electric-light plant for the purpose of lighting up their grounds, the Graham Inn and the commercial part of the city.

Bids are being received by the Norfolk & Western Railroad Company for the building of a grand Union Passenger Depot at the junction and terminus of the Clinch Valley division, New River division and Ohio extension of the Norfolk & Western Railroad.

The Graham Land & Improvement Company have plans perfected for a fine hotel, which they hope to have ready for occupation by September 1st. The hotel will be heated by steam and lighted by electricity, and it is the aim of the company to make it one of the most attractive hotels in Virginia.

The Graham Publishing Company has been formed with a capital of \$12,000, all of which is subscribed.

Projected Enterprises:

Woolen mill, \$50,000.

Flour mill, 75 barrels capacity, \$35,000.

A muck bar rolling mill company with a large capital.

On the 10th of April, 1890, the Graham Land & Improvement Company sold at auction \$165,000 worth of business and resident lots. During the same day the private sales were large, making a total of \$210,000.

Lots are comparatively very cheap at current prices.

Capital stock \$250,000, one hundred dollars per share. Present worth two hundred dollars per share and none to be had.

Maslin's Patent Steam Pump.

Pat. Feb. 12, & Dec. 3, '92.

Cheapest and Best Automatic Steam Vacuum Pump Handling DIRTY and GRITTY LIQUIDS without Wear, Oil or Care. Simple, Economical, Efficient & Durable. Pumping Plants for Contractors, Irrigation, Water Works, Railroads, Mining & General Hydraulic Purposes. Write or call for Circulars. JOHN MASLIN & SON, SOLE MANUFACTURERS, 195-197 1st St., Jersey City, N. J.



THE COOK WELL CO.
CONTRACTS TAKEN FOR FURNISHING WATER SUPPLY COOK'S SYSTEM OF WELLS. 18 YEARS EXPERIENCE IN WELL SINKING FOR WATER WORKS, RAILROADS, FACTORIES, BREWERIES ETC. ARTESIAN WELL PUMPS 4 IN. TUBE WELL SUPPLIES. SEND FOR CATALOGUE OF PATENT WELL MATERIAL.

THE NEW SUPERIOR
Double-Acting, Non-Freezing **FORCE PUMP**
ESPECIALLY ADAPTED FOR **DRILLED WELLS**
DOUBLE WROUGHT PIPE STOCK NON-BREAKABLE.
LARGE & STRAIGHT WATER-WAYS. STEADY FLOW. EASY WORKING.
2 1/2 in. Brass Cylinder goes in 3 in. Well
3 in. Brass Cylinder goes in 3 1/2 in. Well
PORCELAIN VALVE SEAT.
Write for descriptive catalogue and circulars. Address **THE SUPERIOR MACHINE CO.,** SPRINGFIELD, OHIO.

COMPLETE STEAM PUMP
10 SIZES FROM \$7 TO \$75
FOR WATER SUPPLY TANKS, FIRE PUMPS ETC.
VAN DUZEN & TIFT
SOLE MAKERS
CINCINNATI, O.
WRITE FOR PRICES AND DESCRIPTIVE CIRCULARS.

Subscribe to the MANUFACTURERS' RECORD
Price \$4.00 a year, or six months for \$2.00.

BARR PUMPING ENGINE CO.
GERMANTOWN JUNCTION, PHILADELPHIA, PENNA.
DUPLIX STEAM PUMPS.
* POWER PUMPS. *
PRESSURE PUMPS.
INDEPENDENT CONDENSING APPARATUS.

THE BUFFALO STEAM PUMP CO.
BUFFALO, N. Y. MANUFACTURERS OF
STEAM PUMPS
FOR ALL DUTIES.

PUMPS
We manufacture direct acting Duplex and Crank and Fly Wheel Steam Pumps for all services. Brass Founders and manufacturers of Brass and Iron Body goods. Straightway valves, etc. Iron Pipe and Fittings and Mill Supplies. Boiler Feed Pumps a specialty. Address **THE JOHN H. MCGOWAN CO.**
42, 44, 46 Central Ave., CINCINNATI, O. | Branch House, 1425 E. Main St., RICHMOND, VA.

HYDRAULIC JACKS.
BEST IMPROVEMENTS. MOST STYLES.
Hydraulic Presses, Hydraulic Pumps, Valves & Fittings,
Hydraulic Transfer Jacks for Removing Locomotive Drivers and Trucks.
LEVER PUNCHES and SHEARS.
WATSON & STILLMAN
204, 206, 208 & 210 E. 43d Street, New York.

SILVER & DEMING MFG CO.
MANUFACTURERS OF
PUMPS
FOR
POWER HAND & WINDMILL USE.
ARTESIAN WELL PUMPS & CYLINDERS A SPECIALTY
SALEM, OHIO.

If you want the BEST, MOST EFFICIENT and DURABLE

CENTRIFUGAL PUMP

IN THE MARKET, REMEMBER THAT THE Original Baldwinsville Centrifugal Pumps ARE MANUFACTURED ONLY BY **BOGGS & CLARKE, - - SYRACUSE N. Y.** Write for Catalogue and Prices.

Bucket Plunger Pumps.
Valley Pump Co.
EASTHAMPTON, MASS.
ENGLISH, MORSE & CO.
KANSAS CITY, MO.

DEAN BROS' STEAM PUMP WORKS.

INDIANAPOLIS, IND.
PUMPING MACHINERY FOR ALL PURPOSES. BOILER FEEDER. BREWERS AIR PUMP. FIRE PUMP. DUPLEX PUMP. SEND FOR CATALOGUE AND PRICES.

BLAKESLEE MFG. CO.
DU QUOIN ILL.
SEND FOR CATALOGUE
STEAM PUMPS.
We have just issued a new illustrated catalogue of our Steam & Jet Pumps. A copy will be mailed free on application.

THE LAIDLAW & DUNN CO.
CINCINNATI, O.
PUMPS OF EVERY DESCRIPTION. STANDARD DUPLEX PUMP AND BOILER. STANDARD COMPOUND STEAM PUMP. STANDARD DUPLEX STEAM PUMP. HERO BOILER FEEDER. SEND FOR CIRCULAR.

GEO. F. BLAKE MFG. CO.
BUILDERS OF STEAM AND POWER
Pumping Machinery
111 Federal Street, Boston.
95 and 97 Liberty St., N. Y., 535 Arch St., Philadelphia.

The Baldwinsville Centrifugal Pump.
OLDEST, BEST AND LATEST IMPROVED.
Especially adapted for contractors' use, Pumping Coffin Dams, Sewers, Sand-Pumping, etc. Irrigating Plants a Specialty. Address for catalogue, **IRVIN VAN WIE, 48 & 50 West St., Syracuse, N. Y.**
Established 1861. Removed to Syracuse 1881.

The Improved Smith & Vaile
— SINGLE, DUPLEX AND COMPOUND —
Steam Pumps
FOR EVERY DUTY.

Water-Works Machinery.

The SMITH & VAILE CO.
DAYTON, OHIO, and NEW YORK,
112 LIBERTY STREET.

EASTERN AND SOUTHERN AGENTS:
THOS. K. CAREY & BROS., 26 Light Street, - - BALTIMORE, MD.
G. W. STORER, 149 North Third Street, - - PHILADELPHIA, PA.
D. A. TOMPKINS CO., - - CHARLOTTE, N. C., and ATLANTA, GA.

THE GORDON STEAM PUMP CO.

HAMILTON, OHIO.

Steam Pumping Machinery.

WATER WORKS AND SEWERAGE PUMPING ENGINES

FOR CITIES, TOWNS AND VILLAGES.

Pumps for Every Duty.

Patterns Recently Remodeled.

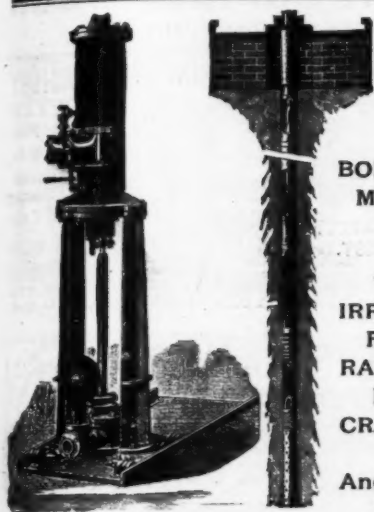
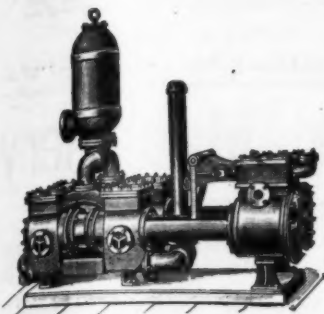
BOILER FEED PUMPS, ELEVATOR PUMPS, FIRE PUMPS, DEEP WELL PUMPS.

NEW YORK--98 LIBERTY STREET.

PHILADELPHIA--705 ARCH STREET.

PITTSBURGH--LEWIS BLOCK.

CHICAGO--PHENIX BUILDING.



ARTESIAN WELL PUMPS.

CAMERON STEAM PUMPS.

PUMPS FOR
BOILER-FEEDING,
MINES,
REFINERIES,
BREWERIES,
TANNERIES,
IRRIGATING,
FIRE PURPOSES,
RAILROADS and
FILLING TANKS,
CRANK and
FLY WHEEL
And VACUUM

SEND FOR
Illustrated Catalogue A.



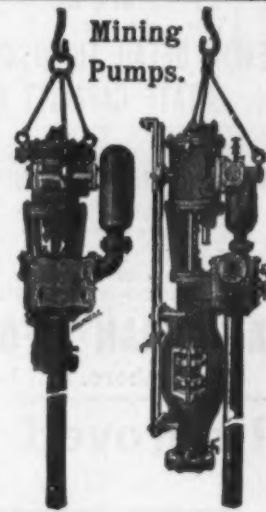
SIMPLE,
COMPACT,
DURABLE,
EFFICIENT.

ADAPTED TO
ALL PURPOSES.

NO OUTSIDE
VALVE GEAR.

The A. S. Cameron Steam Pump Works,
PUMPS. Foot of East 23d Street,

NEW YORK. Piston Pattern. Plunger Pattern.



Mining
Pumps.

THE ECLIPSE PUMP MFG CO.

RAILWAY WATER STATION OUTFIT
EXCELSIOR DIRECT ACTING STEAM PUMP
GENUINE DUPLEX STEAM PUMP
ECLIPSE FEEDER

PUMPS OF EVERY DESCRIPTION. CINCINNATI, O. SEND FOR CIRCULAR

SPIRAL WELD STEEL PRESSURE PIPES.



HAMMER WELDED.

FLANGE STANDARD.

Couplings for all sizes.

Practical for Water, Gas, Steam or Air, under Light or Heavy Pressures.
STRONGER, LIGHTER, CHEAPER than any other Pressure Tubes manufactured.
THE SPIRAL WELD TUBE CO., 43 John Street, New York.

S. E. NOBLE, Pres.

JOHN E. WARE, Sec. and Treas.

R. F. CARTER, Supt.

WEBSTER FILE WORKS, HAND-CUT FILES

Manufacturers of

Send for Price List.

COURT STREET,

TAUNTON, MASS.

H. E. McWANE, President and General Manager.

W. D. CAMPBELL, Secretary and Treasurer.

THE GLAMORGAN COMPANY, Proprietors of HILL CITY PIPE WORKS

Manufacture all kinds of Blast Furnace, Coking and Mining Machinery; Rollers, Engines, Tramway and Construction Car Castings, and Tobacco Machinery, &c.
Prices on application.
LYNCHBURG, VA.

CHATTANOOGA FOUNDRY & PIPE WORKS.

DAVID GILES, Pres. C. E. BEXTER, Vice-Pres. M. LLEWELLYN, Secy. and Treas.
Successors to B. GILES & CO., Chattanooga, Tenn., Manufacturers of



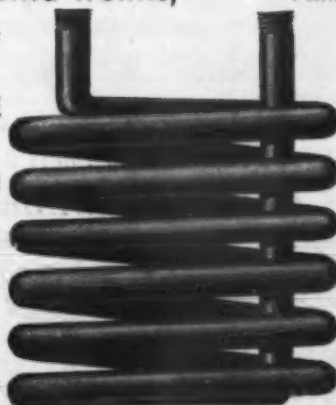
Also Castings and Patterns of Every Description made to order.

JAMES D. CARDELL & CO.

PIPE BENDING WORKS,

Philadelphia, Pa.

Coils of
WROUGHT IRON PIPE
for
ICE and REFRIGERATING
MACHINES,
CHEMICAL WORKS,
SOAP WORKS,
BLAST FURNACES.



Coils of
Any Desired Length
of
WELDED PIPE.
PIPE BENDING
and
WELDING A SPECIALTY

THE ANNISTON PIPE WORKS

ANNISTON, ALA.

MANUFACTURERS OF



CAST IRON GAS & WATER PIPE

Special Castings, General Castings and Machine Work.

THE WASHINGTON HYDRAULIC PRESS BRICK COMPANY,

MANUFACTURERS OF
Ornamental and Plain Front Pressed Brick in Red, Brown,
Gray and Buff Colors, also Rock-Faced and Roman Brick.

Brick for Arches Ground to any Radius.

Correspondence and Inspection of Works Solicited.

OFFICE: Kellogg Building, Washington, D. C.

Works at Waterloo, Va.

FRUIT EVAPORATORS.

Particulars Free. Six Sizes.

Adapted for Factory Plants,
Farmers, Grocers, Fruit
Dealers, Storekeep-
ers, &c.

EVERY DETAIL FURNISHED.
STATE CAPACITY WANTED.

The Prices Range from
\$25, \$50, \$75, \$175, \$350 to \$1,000
and upwards.

Order early. If any delays occur it will
be in our busy season. There is money in
the use of an evaporator. Address

AMERICAN MFG. CO.

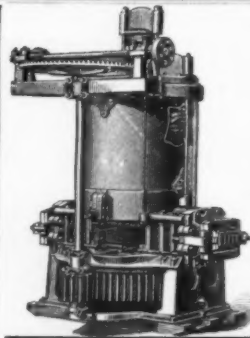
Waynesboro, Pa., Box E.

Brick Machine.

MOOSIER



Soft and Stiff Clay Brick Machines. Send for
Circulars and Price Lists. Manufactured by
NOLAN, MADDEN & CO., Bushville, Ind.



Brick Machinery

Capacity 15,000 to 100,000.

Pug Mills, Crushers, Elevators, Etc.

Full Outfits a Specialty. Satisfaction Guaranteed.

ADDRESS

J. W. PENFIELD & SON

WILLOUGHBY, OHIO, U. S. A.

BRICK MACHINERY ALSO TILE MACHINERY Full FACTORY

CAPACITY
10 to 100,000
PER DAY.

8
Different
KINDS
BRICK
MACHINES

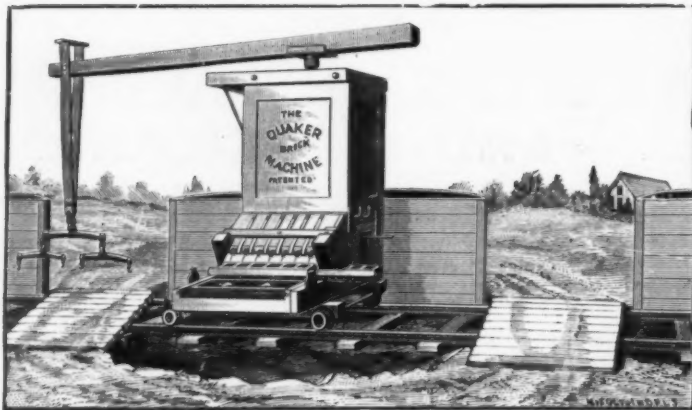


THE LATEST
and BEST.

SEND FOR CATALOGUE.

THE FREY, SHECKLER COMPANY, BUCYRUS, O., U. S. A.

Improved Brick Machinery AND BRICK MAKERS' SUPPLIES.



THE NEW **QUAKER** HORSE-POWER BRICK MACHINE,
Capacity 15,000 to 20,000 per day. Steam-power 25,000 to 40,000 per day.

Spiral Pug Mills, Mold Sanding Machines, Molds, Barrows, Trucks, &c., &c. We contract to furnish
and Equip Complete Yards, Engines, Boilers, Shafting, Pulleys, Belting, &c., &c.
Send for illustrated Catalogue. Correspondence Solicited.

FLETCHER & THOMAS, Indianapolis, Ind.

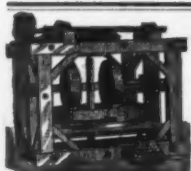
Chambers' Brick Machinery



15,000, 25,000, 50,000 per day Capacity.

GUARANTEED AND FURNISHED ON THIRTY DAYS' TRIAL.

CHAMBERS BROS. CO., Philadelphia, Pa.



Brick and Terra Cotta Machinery

Steam Sewer Pipe Presses, Dry Pans
for Grinding Clay, Wet Pans for
Tempering Clay, Pug Mills
and Engines. Complete
Outfits.

STEVENSON & CO., Wellsville, O.



BRICK-MAKER'S SUPPLIES

TRUCKS MOLDS BARROWS & C. MACHINES & FOUNDRY WORK

G. W. RAYMOND & CO.,
DAYTON, O.

BRICK MAKERS SUPPLIES MADE BY J. C. ARNOLD NEW LONDON O.

Send for Illustrated Catalogue. Mention Manufacturers' Record.

SEND FOR THIS BOOK
FREE ON APPLICATION.

THE BABCOCK & WILCOX CO. WATER TUBES

107 HOPE ST.
GLASGOW, SCOTLAND.

30 CORTLANDT ST. N.Y.

BRANCH OFFICES:
BIRMINGHAM, ALABAMA
CHICAGO, ILLINOIS
CINCINNATI, OHIO
CLEVELAND, OHIO
DETROIT, MICHIGAN
INDIANAPOLIS, INDIANA
KANSAS CITY, MISSOURI
LOUISVILLE, KENTUCKY
MEMPHIS, TENNESSEE
NEW YORK, N.Y.
PHILADELPHIA, PENNSYLVANIA
PITTSBURGH, PENNSYLVANIA
RICHMOND, VIRGINIA
ST. LOUIS, MISSOURI
ST. PAUL, MINNESOTA
TAMPA, FLORIDA
WASHINGTON, D.C.

MANUFACTORIES IN UNITED STATES, SCOTLAND, FRANCE, GERMANY & AUSTRIA.

Awarded the Grand Prize at late Paris Exposition.

JARVIS Patent FURNACE



For Setting Steam Boilers.

Economy of Fuel, with Increased capacity of Steam
Power. Like the Siemens Process of Making
Steel, it utilizes the waste gasses with hot air on top of
the fire. Will burn all kinds of waste fuel without a
blast, including Slack Coal, Sawdust, Logwood Chips
&c. Send for Circulars.

JARVIS ENGINEERING CO.

J. N. PRATT, Treas. and Gen'l Manager.
61 Oliver Street, BOSTON, MASS.

SOUTHERN REFERENCES:

Eagle & Phenix Mfg. Company, Columbus, Ga.
Anniston Mfg. Co., Anniston, Ala.
P. King Mfg. Co., Augusta, Ga.
Rose Mining Co., Charleston, S. C.
Maryland Pavement Co., Baltimore, Md.
Brush Electric Light Co., Baltimore, Md.
Ettrick, Matosca and Battersea Mfg. Co's.,
Petersburg, Va.
Rasin Fertilizing Co., Baltimore, Md.
Fanner & Delaney Engine Co., Richmond Va.
Sibley Mills, Augusta, Ga.

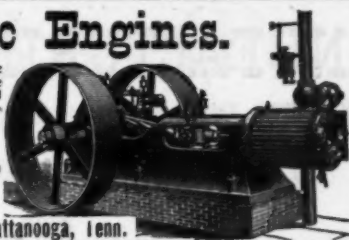
Graniteville Mfg. Co., Graniteville, S. C.
Charleston Fagging Co., Charleston, S. C.
P. H. Mayo & Bros., Richmond, Va.
Phosphate Mining Co., Beaufort, S. C.
Brush Swan Electric Light Co., Norfolk, Va.
Columbus Ice & Refrigerator Co., Columbus,
Ga.
Lenoir Manufacturing Co., Lenoir, East Ten-
nessee.
Vanceuse Mill, Graniteville, S. C.
Charleston Electric Light Co., Charleston, S. C.

Valley Automatic Engines.

Applicable to any and all uses requiring Close Regulation and Economical use of Steam. They are constructed throughout of selected material and finished in the best possible manner. Guaranteed to equal any of their class extant in Economy, Regulation, Durability and General Efficiency.

VALLEY IRON WORKS,
MANUFACTURERS,
WILLIAMSPORT, PENNA.

CASEY BOILER MFG. CO., Sales Agents, Chattanooga, Tenn.

**Webster, Camp & Lane Machine Company,**

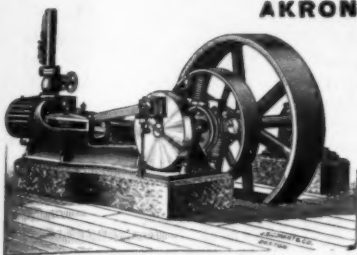
AKRON, OHIO.

BUILDERS OF

AUTOMATIC ENGINES,

— BOILERS, —

Friction Clutch Pulleys,



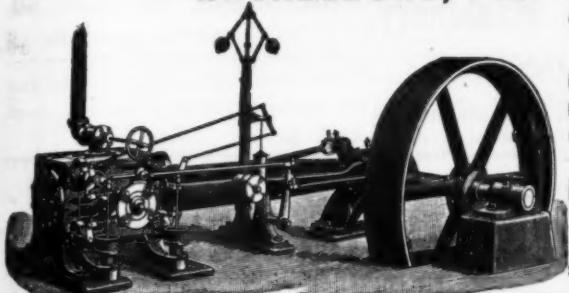
Write for Circulars.

COMPLETE POWER PLANTS.

ECLIPSE CORLISS ENGINES.

Frick Company, Engineers, Builders,

— WAYNESBORO, PA. —



40 to 1,000 H. P.
Made.

Condensing, Non-Condensing & Compound.
Send for Corliss Circular.

Ice-Making and Refrigerating Machinery.
Send or Ice-Machine Circular.

Special Automatic Electric Light Engines, Steam Boilers, Traction and Portable Engines, Saw Mills. * Send for our General Catalogue.

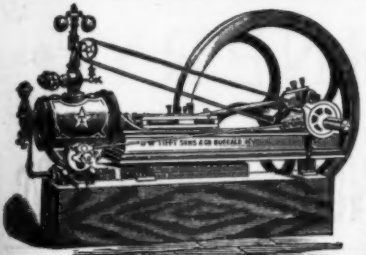
FOR THE LOWEST-PRICED FIRST-CLASS (—) ENGINES & BOILERS

ADDRESS

GEO. W. TIFFT, SONS & CO.
BUFFALO, N. Y.

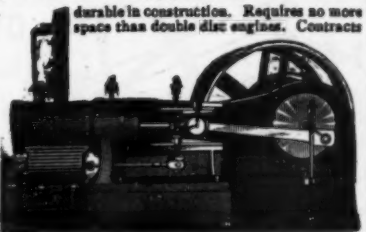
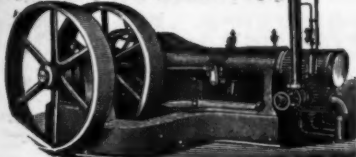
5 to 500 H. P. Special Stock Sizes 5 to 50 H. P., both Stationary and Semi-Portable.

A few good Second-Hand Engines and Boilers are for sale at an astonishingly low figure. Must be sold to make room for stock. Correspondence solicited. Mention this paper.

**BECK AUTOMATIC ENGINE.**

For Electric Light, Flour, Cotton, Woollen and Rolling Mill Service and all other purposes requiring power. Economical in Steam Consumption. Does not race. Speed constant under varying loads and pressure of steam. Simple.

Sturdy in construction. Requires no more space than double disc engine. Contracts

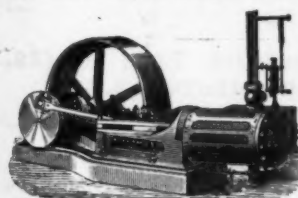


taken for complete steam plants, including boilers and all connections, masonry and erection. All work guaranteed. Send for catalogue and full particulars. Also builders of Portable, Vertical and Stationary Engines. Boilers of all styles, and Saw Mills. Address **TATLER MFG. CO., Chambersburg, Pa.**

ALEX. K. RARIG & CO.

COLUMBUS OHIO.

MANUFACTURERS OF
Blast Furnace Plants,
AUTOMATIC CUT-OFF ENGINES,
HOISTING ENGINES,
Boilers, Boiler Plate Punches,
ROLLS AND SHEARS,
Clay-Working Machinery,
Steam Sewer Pipe Presses.



Socket Pipe, Tile and Fire-Proof Dies, Wet and Dry Pans for Grinding and Tempering Clay for Sewer Pipe, Terra Cotta, Brick and Tile. We furnish complete outfits for Sewer Pipe and Brick Plants. Write for catalogue. Correspondence solicited. Mention this paper.

**Payne Automatic Engines**

HORIZONTAL and VERTICAL ENGINES and BOILERS.

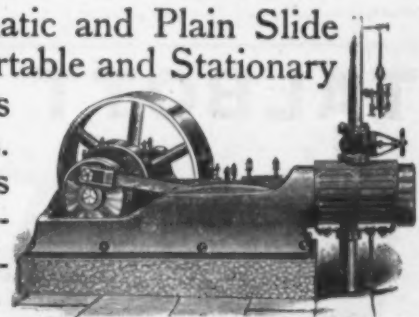
Especially adapted to Electrical Purposes. Also COMPOUND AND TRIPLE COMPOUND ENGINES. B. W. PAYNE & SONS, Manufacturers, Elmira, N. Y.

N. Y. Office, 45 Dey St.
36 W. Randolph St., Chicago;
H. P. Gregory & Co., San Francisco, Cal.

**Porter Manfg. Co., Limited.**

— SYRACUSE, N. Y. —

Builders of Automatic and Plain Slide Valve Engines, Portable and Stationary Boilers, Stand Pipes for Water Works. Only Manufacturers of the New ECONOMIZER PORTABLE BOILER.

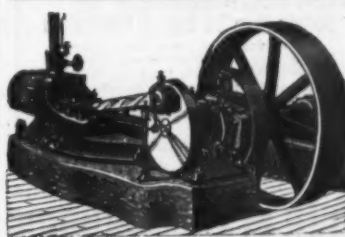


Complete motive power PLANTS FURNISHED.

THE HEWES & PHILLIPS
Newark, N. J.
IRON WORKS

Improved CORLISS ENGINES, High Pressure. Condensing and Compound TUBULAR BOILERS. HEAVY FLY WHEELS A SPECIALTY. IN SIZES UP TO 36 FT. DIA. BY 10 FT. FACE.

Manning Patent Vertical Boilers.

**Russell & Co.**

MASSILLON, OHIO.

BUILDERS OF

Automatic Engines, BOILERS, ETC.

Complete Power Plants Furnished.

SOUTHERN AGENCIES:
CAMPBELL, ZELL & CO., Baltimore, Md.
RUSSELL & CO., 75 S. Forsythe St., Atlanta, Ga.



Strong, Well Built, Serviceable
12 TO 80
Horse Power.

STEAM ENGINES

Adapted to Heavy, Continuous Work. Every Engine tested under full load. For descriptive circulars, address

Chandler & Taylor, Indianapolis, Ind.

CLEVELAND AND HARDWICK
ERIE ENGINE WORKS
MANUFACTURERS OF STEAM ENGINES and BOILERS.
ERIE, PENNA.

Wm. A. HARRIS STEAM ENGINE CO.

(Successors to Wm. A. Harris.)

PROVIDENCE, R. I.

Builders of HARRIS-CORLISS ENGINES, FROM 30 TO 2,000 HORSE POWER.

These Engines are carefully built of best materials and in different forms, such as Non-Condensing, Condensing and Compound Condensing. Send for copy of ENGINEERS AND STEAM USERS' MANUAL, by J. W. HILL, M. E. \$1.25. Mention this paper and send for catalogue. WM. A. HARRIS, Prost. & Treas. The D. A. TOMPKINS CO., CHARLOTTE, N. C., Southern Agents.

THE BIRDSALL COMPANY.

— OF AUBURN, N. Y. —

Stationary, Automatic, Portable and Traction Engines, Return, Tubular, Locomotive and Steam Heating Boilers, Radiators, Portable Saw and Grist Mills, Shingle Machines, Thrashers, Fruit Evaporators, etc., etc.

Branch House, 203 North Street, Moon Building, Baltimore, Md.

FRED. I. MOSKOW, Manager.

336, 338, 340, 342 NORTH ST. **The WARFIELD MANUFACTURING CO.** BALTIMORE, MD.

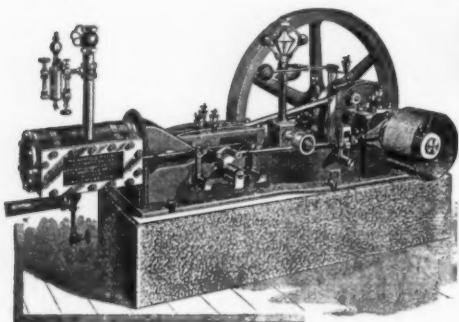
COMPLETE PLANTS FOR THE

Generation and Transmission

STEAM POWER.

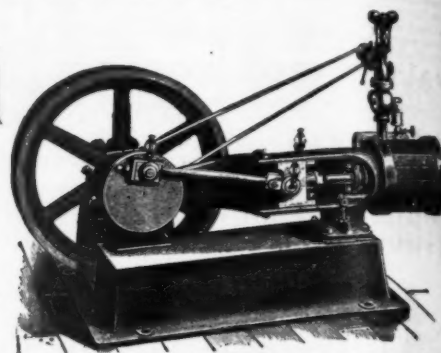
GENERAL MACHINE WORK.

Machinery Designed and Constructed for Special Purposes.



THE WARFIELD-PILLINGS AUTOMATIC ENGINE.

Class A.—The Warfield-Pillings Automatic Engine. A high-grade Engine, (for high or medium speed,) for electric light and other purposes.
Class B.—The Warfield Throttling Governor Engine—Horizontal and Vertical.



THROTTLING GOVERNOR ENGINE, HORIZONTAL.

OUR MACHINERY IS CLASSED AND CATALOGUED AS FOLLOWS:

Class C.—Steam Boilers—Stationary Tubular, Upright Tubular.
Class D.—Shafting, Hangers, Pulleys, Couplings, &c.
Class E.—Fruit, Vegetable and Oyster Packers' Machinery—most complete line on the market.

Class F.—Can-Making and Sheet-Metal Machinery.
Class G.—The Warfield-Pillings Patent Water Motor, Ceiling, Column and Exhaust Fans, complete Ventilating Apparatus, Patent Electric Motors.

Any of the above Catalogues mailed upon application.

TALBOTT & SONS, RICHMOND, VA.

MANUFACTURERS OF

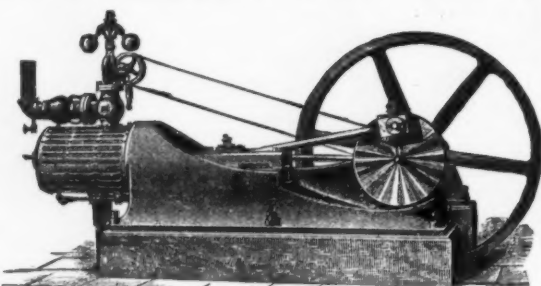
Engines and Boilers,

SAW, CORN AND WHEAT MILLS,

ROPE FEED for SAW MILLS, TIMBER GUAGES, graduated by 1-16 of an inch. Shafting, Hangers and Pulleys,

Cotton-Seed Oil Mill Machinery,

MODERN COTTON GINNERIES.



BRANCH OFFICES:

MACON, GA.

CHARLOTTE, N. C.

ESTIMATES AND CONTRACTS MADE FOR COMPLETE OUTFITS, Embracing the Latest and Best Improvement.

ENGINES AND BOILERS

FROM 2 TO 400 HORSE-POWER.

The strongest, most compact and best built outfits on the market.

Wood-working and Iron-working Machinery a Specialty.

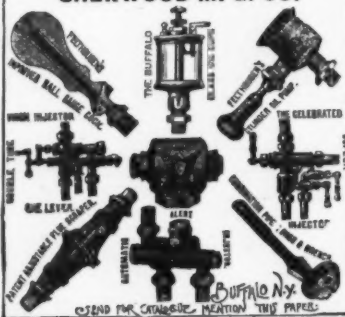
Send for Catalogue B.

THE GLOBE MACHINE CO.

35 Broadway, New York.

Why not subscribe for the MANUFACTURERS' RECORD? Price \$4 per year or six months for \$2.

SHERWOOD MFG. CO.



THE CELEBRATED UNION INJECTOR.
Only One Lever to Operate.
The Eagle Ejector.

The Best Jet Pump Made.

Felthousen's Cylinder Oil Pumps; Improved Gauge Cocks; Adjustable Spring Flue Scraper; Improved Ratchet Drills; Combination Pipe and Nut Wrench; Compression Grease Cups.
Buffalo Glass Oil Cups & Lubricators
Pop Valves; Steam and Water Gauges; Single Bell and Chime Steam Whistles; Piston and Valve Rod Packing; Supplies all kinds for Engines and Boilers.

SHERWOOD MFG. CO.

Sole Manufacturers. BUFFALO, N. Y.

THE RELIANCE

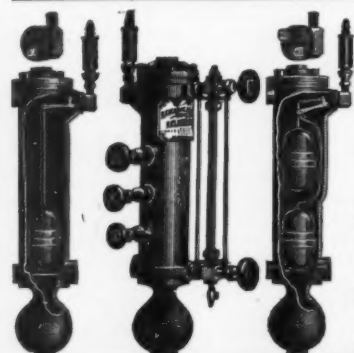
Safety Water Columns

OVER 15,000 IN USE.

SAFETY of Life and Property. **ECONOMY** of steam, of fuel, of repairs, of wear on the boiler.

The Most Elegant and Most Economical Water Columns ever placed on boilers. No steam user or engineer can afford to operate boilers without them. This is the reason why they have been ADOPTED BY MANY OF THE LARGEST STEAM USERS IN THE WORLD.

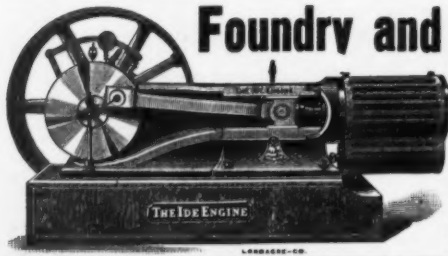
Every Column Warranted. Send for price list.
The RELIANCE GAUGE CO., Sole Manufacturers, Argyle Building, Cleveland, O.
For sale by all Dealers. For sale by all Boiler Makers.



Foundry and Machine Dept.

Harrisburg Car Manufacturing Co.
HARRISBURG, PA.

Manufacturers of the **Ide Automatic Engine**, Compound and Standard patterns. Also builders of boilers and complete power plants. New York Office, Messrs. Fleming & Kimball, 17 Day street. New England Office, Messrs. John Post, Jr. & Co., 70 Kilby street, Boston. Baltimore Office, Messrs. Thomas K. Carey & Bro., 86 Light street, Baltimore.



"THE KRIEBEL" NEW MODEL STEAM ENGINES.

Single and Double Cylinder STATIONARY, SEMI-PORTABLE, MARINE and MOUNTING ENGINES. STEEL BOILERS of all styles and sizes. AUTOMATIC and HORIZONTAL THROTTLING ENGINES. GOVERNORS, INJECTORS, STEAM PUMPS, ETC.

Send for Catalogue, stating what you wish prices on.

RICE & WHITACRE MFG. CO.

47 & 49 S. Canal Street, CHICAGO, ILL.



Valk & Murdoch Iron Works

CHARLESTON, S. C.

Engines and Boilers

MACHINERY

— FOR —

Complete Fertilizer Works, Rice Mills, &c.

SKINNER ENGINE CO., ERIE, PA.

OVER 3400 IN USE.

Manufacturers of PORTABLE and STATIONARY

ENGINES and BOILERS

SEND FOR CATALOGUE.

MORTON, REED & CO., Agts., Baltimore, Md.
NEW YORK and NEW ENGLAND OFFICE:
C. R. VINCENT & CO., 15 Cortlandt St., N. Y.



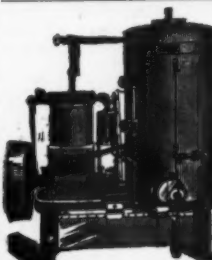
Acme Automatic Engine,

With BRYANT'S Patent Safety Boiler.

Sizes 1, 2 and 4 H. P. Fuel, Kerosene (Coal) Oil, 120° to 150° Fire test. No dust, ashes, or smoke. No Skilled Engineer required. "Brake" Test shows that 3 1/2 gals. fuel will deliver a full H. P. on belt for 12 hours, in the case of our 1 H. P. Engine and Boiler.

Rochester Machine Tool Works,
BUILDERS, ROCHESTER, N. Y.

SEND FOR CATALOGUE.



BOOKS. NEWSPAPERS. CIRCULARS. FINE CUT WORK
Record Printing House, Cor. Exchange Pl. and Commerce St.
PAMPHLETS. CATALOGUES. PRICE-LISTS. A SPECIALTY.

Stilwell's Patent Lime Extracting HEATER AND FILTER Combined.

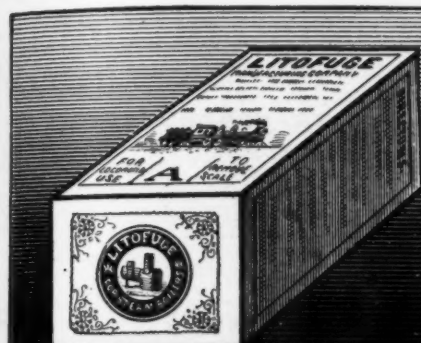
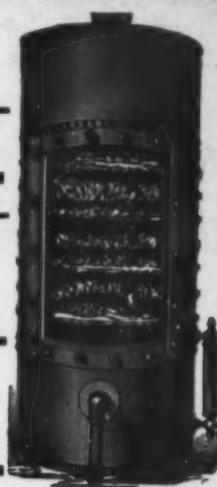
The Only Lime Extracting Heater That Will Prevent Scale in Steam Boilers.

Removing all impurities from the water before it enters the boiler.

Thoroughly Tested. Over 3,000 of Them in Daily Use.

This cut is a facsimile of the appearance of a No. 5 Heater at work on ordinary lime water, when the door was removed after the Heater had been running two weeks. Illustrated Catalogue Free.

STILWELL & BIERCE MFG. CO., DAYTON, O.



Litofuge.

is the best boiler compound.

LITOFUGE MANUF'G CO. 62 JOHN ST. NEW-YORK.

The Tudor Boiler Manufacturing Co. Steam Boiler and Tank Makers

OFFICE, 242 E. Pearl St. (opp. Pittab'g, Cincinnati & St. Louis Ry.), CINCINNATI, O.
SECOND-HAND BOILERS ALWAYS ON HAND.



The Zell Improved Boiler

Most Economical Steam Generators on the market.

RESULTS GUARANTEED.

CAMPBELL & ZELL CO.

IRON FOUNDERS,

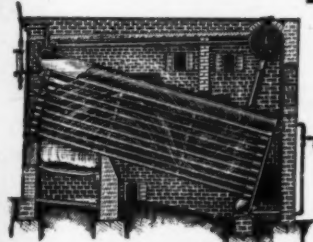
Manufacturers and Engineers,

ESSEX and BURKE STS.

BALTIMORE, MD.

New York Office, 15 Cortlandt Street.

Phila. Office, Room 918, Drexel Bldg. Send for circulars.



THE CURTIS BALANCED STEAM TRAP.

MANUFACTURED BY

THE CURTIS REGULATOR CO.

160 Beverly St., Boston, Mass.

HAS balanced Valve, therefore works equally well under HIGH or LOW pressure; discharges full area of pipe; has hard composition float, vented to the atmosphere, and is warranted not to collapse or fill.

GENERAL AGENCIES.

NEW YORK, 109 Liberty st.

PHILADELPHIA, 2035 North Front st.

MINNEAPOLIS, 210 South Third st.

CHICAGO, 218 Lake st.

THE ASHTON VALVE CO.'S Lock-Up "POP" Safety Valves,

FOR STATIONARY, MARINE, LOCOMOTIVE AND HOISTING ENGINE BOILERS,

Instant and perfect relief given. Non-corrosive and always reliable. Also,

—WATER RELIEF VALVES FOR STEAM PUMPS AND STANDPIPES.—

271 Franklin St., BOSTON, MASS. New York Office, 107 Liberty St. Branch Office, 218 Lake St., CHICAGO.

ARMSTRONG BROS.

MANUFACTURERS OF

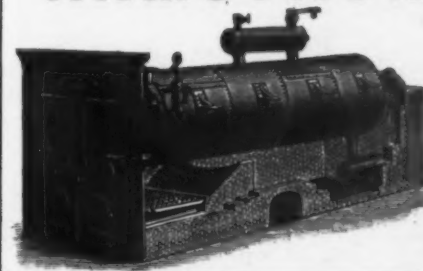
Engines and Boilers

ALL SIZES AND KINDS.

Output Last Year 1473 Engines and Boilers.

Have large stock New Standard Boilers, and also large stock Second-hand Engines and Boilers, all sizes and kinds. Will dispose of at a bargain. For Circulars address

ARMSTRONG BROS., SPRINGFIELD, OHIO.



THE LOCKWOOD MANUFACTURING CO.

BUILDERS OF

Steamships, Tow Boats, Steam Yachts,

ENGINES AND GENERAL MACHINERY.

ARTESIAN WELL TOOLS.

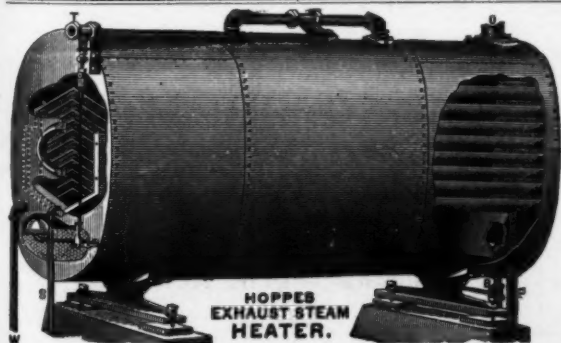
Send for Estimates.

EAST BOSTON, MASS.

THE HOPPE'S MFG. CO., Springfield, Ohio, U. S. A.

MANUFACTURERS OF THE

Hoppes Exhaust Steam Feed Water Heater.



This Heater has many superior points of merit over all other heaters on the market, among which is the Automatic Feed-Water Regulator, which prevents the nuisance of overflow, so common in other open heaters; and its Oil Catcher, which thoroughly separates the oil from the exhaust steam, and prevents its mixing with the feed-water. The construction of this Heater insures the heating of the water to boiling point, and the retention of all solids that will separate at the heat of exhaust steam. Illustrated catalogue sent on application.

3,000,000 BRICK WANTED

For Immediate Use at

BASIC CITY, VA.

The Lots and Lands of the Basic City Co. completely encompass the crossing of the **Two Great Coal-Carrying Lines of Virginia**, viz: the Chesapeake & Ohio Railroad and the Shenandoah Valley Railroad.

The company is offering *Extraordinary Inducements* for the removal and Establishment of **MANUFACTURING PLANTS**.

LOCATION,

In the brown iron-ore district, at the crossing of the two great coal-carrying lines of Virginia, viz: the Chesapeake & Ohio and the Shenandoah Valley Railways.

IRON ORE,

Brown Hematite Ore inexhaustible in quantity and excellent in quality.

LIMESTONE

In close proximity and abundant.

WATER

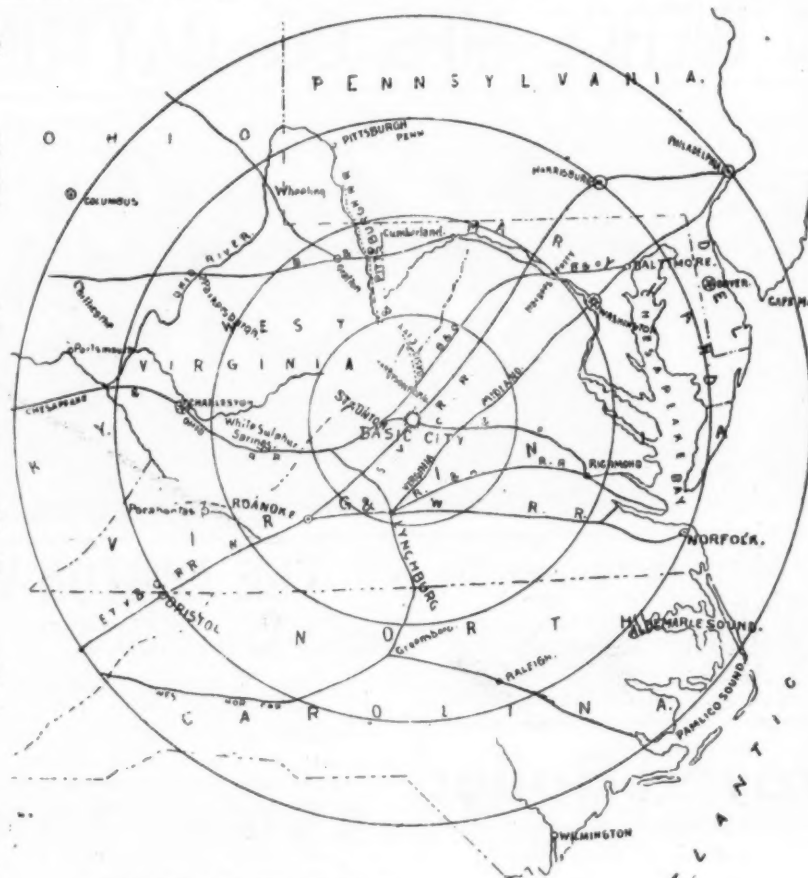
Pure free-stone. The South branch of the Shenandoah River flows through the property. A magnificent Lithia Spring and other medicinal waters.

COUNTRY

Surrounding and tributary equal to any in the Shenandoah Valley in beauty, fertility and productiveness.

TIMBER

Of almost every variety and plentiful.



HEALTHFULNESS,

Unsurpassed. Elevation 1,300 feet, and natural drainage splendid.

TRANSPORTATION,

At present by two independent railways, to the ocean, the West, and Northwest and the South, and a third, the Basic City, West Virginia & Pittsburgh Railroad soon to be built, connecting with the Baltimore & Ohio Railroad.

INDUSTRIES.

Already secured a 100-ton Iron Furnace, Car Works, Paper Mill, Hardware Factory, two Blind, Sash and Building Material Factories, two Brick and Tile Factories, and others are being negotiated for. A large and handsome Hotel in course of construction, 250 feet long, with 85 rooms. The industries will employ at least 900 workmen.

Many new buildings are going up. Work is being pushed on plants for the industries just enumerated, and they will be in operation in a few months.

A Normal College with accommodations for 200 students.

The Coming Iron and Steel Center.



FOR PARTICULARS AS TO THE SPECIAL ADVANTAGES OF BASIC CITY ADDRESS

SAMUEL FORRER, President, or J. M. QUARLES, General Manager,
Basic City Mining, Manufacturing & Land Company, Basic City, Va.

Information as to the financial standing and resources of this Company may be had by addressing the **AUGUSTA NATIONAL BANK** or the **NATIONAL VALLEY BANK**, of Staunton, Va.

EDMONDS & ROBINSON,

In the development of its agricultural, mineral and timber resources; in its general upbuilding and advancement, Texas is making more rapid progress than any other State in the Union. Its population is increasing at a stupendous rate. Millions of dollars from the West and Northwest, from the New England States and from England are pouring into the State for investment in factories, mills, railroads and commercial enterprises.

San Antonio is the commercial and financial center of the great South and Southwest Texas. It is a city of 55,000 population, is the center of the most important railroads in the State, has four national and five private banks, building and loan associations, a large number of industrial establishments and some of the largest jobbing houses in the Southwestern States.

LAWYERS

AND DEALERS IN

REAL ESTATE

In the matter of homes it is the handsomest city in America.

In twelve years it has grown from 20,000 to 55,000.

It is growing more rapidly now than at any former period.

Property in and around San Antonio and throughout Southwest Texas is increasing in value every day. *It will never again be as cheap as it is now.*

There is no place in the world offering greater inducements for the purchase of real estate, either for investment or speculation, with assurance of such large and certain profits.

**SAN ANTONIO,
TEXAS.**

J. R. HUTCHKRAFT, Pres.

A. GATLIFF, Vice-Pres.

D. C. EAVES, Sec'y and Treas.

THE SOUTHLAND INVESTMENT CO.

REAL ESTATE, STOCK & BOND BROKERS

Room 45 Deaderick Building.

P. O. Drawer 6.

KNOXVILLE, TENN.

OUR BUSINESS.

We Buy and Sell on Commission Real Estate, Stocks and Bonds.

Organize Companies to handle Mineral and Timber Lands

Report upon Costs of Mine Equipments, including Tramways and Railways. Maps and Profiles Furnished. Reports upon Value of Lands and Abstracts of Titles Furnished

Act as Agents for Local and Non-resident Property-holders to Collect Rents and Sell Property.

Come and see us; if we do not have what you want we will get it for you.

List your property with us

JOHN C. FIELD, REAL ESTATE.

Town Lots, and Suburban Property.

BLUFFTON, ALA., and TREDEGAR [P. O. Jacksonville], ALA.

"The MANUFACTURERS' RECORD is the Most Widely-Quoted Industrial Paper in the World."

BEDFORD CITY, VA.

(FORMERLY LIBERTY.)

The Most Beautiful Residence Portion of this Growing City is

LONGWOOD PARK,

The Property of the Longwood Land & Improvement Co.

The property is within five minutes' walk of the N. & W. R. R. depot. It is intersected by broad, oak-shaded avenues, and divided into building lots averaging ninety feet front by 230 feet deep. A superb view of the beautiful Peaks of Otter visible from every part of the property. Prices range from \$6 to \$12 per front foot, according to location, &c.

No Better Investment can be made than in Lots in Longwood Park, at these Prices.

THE CITY HAS AN ESTABLISHED SOCIETY.

Churches, Schools and Academies, (among them the finest in the South,) Manufactures of many kinds, a magnificent supply of Free-stone Water, systems of Arc and Incandescent Electric Lighting, admirable Railroad Connections, a surrounding country of unlimited Mineral Resources and Great Fertility. For further information apply to

R. KENNA CAMPBELL, Gen. Manager

The Longwood Land & Improvement Company.

Black Diamond Roofing

COMMENCING ITS SEVENTH YEAR IN USE.

FOR ANY ROOF AND ANY CLIMATE.

Cheap and Durable. Especially Adapted for Southern Climate. More Durable than Metal and Costs Much Less.

WIND-PROOF. WATER-PROOF. FIRE-PROOF. ACID-PROOF.

Applied by anybody. Send for samples and prices.

EHRET-WARREN MFG. CO., SOLE MANUFACTURERS, **St. Louis, Mo.**

16 West Missouri Ave., Kansas City, Mo.



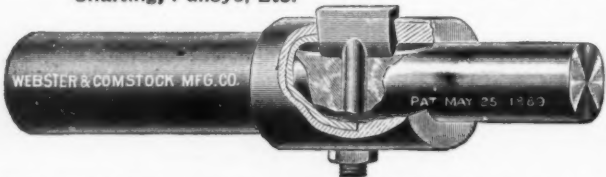
ALSO MANUFACTURERS OF
Building and Sheathing Papers.

WEBSTER & COMSTOCK MFG. CO.

123, 125, 127 Ontario St., & 32, 34, 36 Erie St
CHICAGO, ILL.

MANUFACTURERS OF
MACDONALD FRICTION CLUTCHES,
Shafting, Pulleys, Etc.

FOUNDERS AND GENERAL MACHINISTS. COTTON, RUBBER and LEATHER
DEALERS IN
Coker-Metcalf Power Grain Shovel. **BELTING.**



New Improved Conveyor Coupling, so arranged that by taking out bolt any desired section may be removed.



"HERCULES" Steel Scoop.



SPIRAL STEEL CONVEYOR.

SOLID & INSERTED SAWS.
PLANER KNIVES and BITS.
EMERY WHEELS, FILES.
SAW CUMMERS, SWAGES.
MANDRELS.
LEATHER and RUBBER
BELTING.

CHATTANOOGA SAW WORKS,
MANUFACTURERS and DEALERS IN
SAWS, SAW MILL SUPPLIES
EVERY SAW FULLY GUARANTEED.
WE MAKE A SPECIALTY OF REPAIRING ALL KINDS OF SAWS
CHATTANOOGA, TENNESSEE.

PLANERS and MATCHES.
SHINGLE MACHINES.
LATH MACHINES.
AUTOMATIC ENGINES.
CANC EDCERS.
SHAFTING, PULLEYS AND
HANCERS. BRANT ENG. CO.



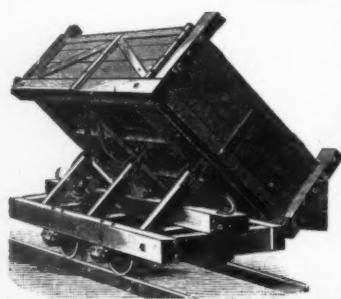
Send for new No. 14 catalogue 13-23 Or d street, Seneca Falls, N. Y., and 40 Barclay st., New York. GENERAL AGENCIES:
Goulds, Caldwell county, Chicago, I. I.; N. O. Nelson Mfg. Co., St. Louis, Mo.

THE PATENT ROLLER GRATE.



NEW ENGLAND ROLLER GRATE CO., 65 Federal Street, Boston.

The only "Shaking" Grate with Roller Bearings upon which the grate bars rest. The result is a simple, positive, easy and reliable movement that will not get out of order. Grate bars reversible, and all parts interchangeable. Put in boiler as easily and quickly as stationary bars, without bolts, nuts, screws or change of fire-box, & satisfaction on guaranteed. AGENTS WANTED.



THE Corey Car & Mfg. Co.
Manufacturers of Every Description of
Dumping and Mining Cars

IN WOOD, IRON AND STEEL.

Portable Track and Switches,

301 & 303 Phenix Building,

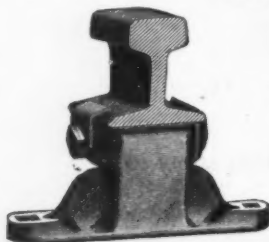
CHICAGO, ILL.

R. T. WHITE, 12 Pearl Street,
BOSTON, MASS. ROOM 6,

Improved Patented Material
FOR
Street Railway Roadbeds.

BEST MATERIAL. LOWEST PRICES.
CORRESPONDENCE SOLICITED.

THOMAS ASHBURNER, Western Agent,
KANSAS CITY, MO.



DAISY CHAIR.

Patented January 28th, 1890.

Sample Chair and Section of Rail sent express prepaid to prospective purchasers. Made of cast iron or cast steel mixture and for any form of rail having a T rail form of base.

For **MINING MACHINERY,**
HOISTING ENGINES,
AIR COMPRESSORS,
All Superior in Design and Efficiency.

Write to
MORRIS COUNTY
MACHINE COMPANY,
DOVER,
N. J.

THE PITTSBURGH BRIDGE COMPANY,
Iron Bridges, Viaducts and Buildings

R. MERYDITH, Agent at Chattanooga, Tenn.

POTOMAC BRIDGE WORKS,

FREDERICK CITY, MD.

BRIDGE ENGINEER and CONTRACTOR.

Iron and Steel Bridges, Roofs, Buildings, Masonry and Pile
Foundations. Contracts taken for Substructure
and Superstructure Entire.

LEWIS J. MILLER, Philadelphia, Pa. **MILLER & BIERCE,** WILL W. BIERCE, Memphis, Tenn.
Engineers and Contractors



Lewis Miller's Improved Steam and Hydraulic Cotton Compress,
(Lewis Miller's and John F. Taylor's Patents.)

The most powerful, economical, and the fastest working Compress built. The only Compress in the world that will load cars and vessels to their full tonnage.

Also Agents and Manufacturers of Steam Engines, Water Engines, Pumps, Boilers, and Heavy Machinery in General.

OFFICES:

PHILADELPHIA, PA., ROOMS 707 & 710 GIRARD BLDG. MEMPHIS, TENN., ROOM 12, COTTON EXCHANGE

Southern Railroads.

Baltimore Sells Its B. & O. Stock.

The city of Baltimore has at last sold its holdings of Baltimore & Ohio stock at par to the only bidder there was, Mr. Edward R. Bacon, of New York. The amount to be paid over on July 1 is \$3,250,000. Mr. Bacon furnished bond in the shape of \$500,000 of the Baltimore & Southwestern Co.'s bonds. The public is no nearer the truth as to the real purchasers of the stock than it was last week. During the week various rumors have been circulated; one that the Barings, of London, wanted the stock; another that Jay Gould was to secure control of the road and fight the Richmond Terminal, and still another that Henry Villard, of the Northern Pacific, was the real purchaser and would immediately take measures to connect those two great systems. In conversation with a representative of the MANUFACTURERS' RECORD, an official of the Baltimore & Ohio stated that though no one outside the leading officers knew the facts of the case, yet among the railroad men the old rumor that the Richmond & West Point Terminal were the purchasers of the stock found the most credence.

A special dispatch to the Baltimore Sun of June 11, states that Mr. John H. Inman, president of the Richmond Terminal, has virtually admitted that his company is the purchaser. He stated that the Terminal Company desired an outlet for their trade in New York, and the necessity for the purchase of the Baltimore & Ohio stock was apparent. Mr. Bacon, who, as has been stated in the MANUFACTURERS' RECORD, is one of the leading officers in the Terminal's system, was instructed to secure the stock. He further said that it was not yet decided whether the Terminal Company will be represented in the company as a corporation or individually. The practical control of the Baltimore & Ohio will increase the Richmond & West Point Terminal's system by nearly 2,000 miles.

A RUMOR is now afloat that the Louisville & Nashville has secured control of the Marietta & North Georgia, which it proposes to extend to Atlanta and there make extensive improvements, purchase the State road, enlarge the yards and make a number of wonderful changes. Stranger things have happened, it is true, but it would have to be a very strange circumstance, it seems, to bring about this state of affairs. From everything that has occurred since the Marietta & North Georgia Co. has acquired its present prominence it would seem that it was rather endeavoring to emulate the example of the Georgia Southern & Florida, which has held aloof from the companies which wanted to include it in their systems, and has gone right along extending its lines and organizing companies to build new roads, until it is the possessor of a very valuable and fast-growing system of its own. The policy of the Marietta & North Georgia is largely governed by persons closely allied to the American Association, Limited, which is building the flourishing city of Middlesborough, and it seems just now rather strange that that association would allow the government of the road to pass from its control, especially just at the time when the Knoxville, Cumberland Gap & Louisville is in a fair way to become a very valuable feeder, and which is becoming more important every day. The American Association is not operating to be controlled, but to control, and should it exercise its control in railroad matters as it has in town-building, the South bids fair to have another system of

railroads, which will prove, in time, as valuable and important as the great systems which are now doing so much in the development of the resources of the Southern country.

MR. JOHN C. DAVIS, of Baltimore, died a few days ago. Mr. Davis has been connected with the Baltimore & Ohio Railroad for about forty years, nearly twenty of which he spent as superintendent of motive power. He was 73 years of age and stood very high in railroad circles, especially in the Baltimore & Ohio.

THE Nashville & Decatur Railroad Co. has declared a semi-annual dividend of 3 per cent.

THE Galveston, Houston & Henderson Railroad Co. has filed suit at San Antonio against the Galveston, Harrisburg & San Antonio for \$133,000. The former company claims that the Galveston, Harrisburg & San Antonio entered into a joint contract with it to operate the complainant's line between Houston and Galveston for one year and has failed to pay its share of the expenses; hence the suit.

THE stockholders of the construction company, which has been organized for the purpose of building the projected Tennessee, Arkansas & Texas Railroad, have held a meeting in Little Rock, at which they elected a permanent board of directors. The directors elected were Major John D. Adams, John G. Fletcher, Isaac Wolf, Zebulon Ward and James R. Miller, of Little Rock; Hugh L. Brinkley, Napoleon Hill and John Overton, Jr., of Memphis; W. J. Little and C. N. Rix, of Hot Springs, and D. H. Scott and J. H. Johnson, of Paris, Texas. The stockholders of the construction company adjourned to meet again on June 18. The Tennessee, Arkansas & Texas Railroad scheme is the outcome of the need for an outlet from Memphis and Little Rock to the Southwest without using the Gould system. Some months ago an effort was made to get the Little Rock & Memphis Co. to extend its road from Little Rock to Paris, Texas, and the enterprise was in a fair way to succeed, when some of the gentlemen, without whom it would be impossible to do anything, refused to co-operate with extension committee, and so the project was killed for the time being. But nothing daunted, Col. Ward, Major Adams and a number of others closely interested in the movement, organized the new company and set about getting subscriptions. Paris subscribed \$60,000, Hot Springs \$50,000 and Little Rock \$130,000. Now the road will likely be built from Little Rock to Paris in a short time. What seems to be troubling the projectors just now is how to get to Memphis; whether or not to conclude peace with the Little Rock & Memphis, which, if the rumor briefly mentioned last week should prove true, would practically give the Louisville & Nashville control of a line of important road about 200 miles in length. This state of things, however, is not so probable as that the company will build its own road to Memphis, and neither lease nor purchase anybody's else property.

THE contract for the construction of the Corpus Christi & South America Railway, which was briefly noticed last week, has been let to the Iowa Southern Improvement & Investment Co., of which Hon. R. C. Cushing, of Omaha, Neb., is president. The project, if carried out, will be far more important than it appears to be at first glance. It will virtually be a Pan-American railway, which will extend from Corpus Christi, through Mexico and Central America, to South America. The

route takes in Brownsville, on the southeastern edge of Texas, a place of 7,000 inhabitants, which enjoys the distinction of being the only town of its size in Texas which is without railroad communication with the outside world. Crossing the Rio Grande at this point, the route strikes the old city of Matamoros, which is nearly three times the size of Brownsville. It is then continued on to the city of Mexico and down through the Southern part of that country, and through Guatemala, Honduras, Costa Rica and Nicaragua into South America. The Port Aransas Co., which is endeavoring to make a deep-water harbor at Aransas Pass, is backing the railroad enterprise. The railway company says in its statement, "give American mails, American merchandise and American passengers a daily railroad train to South America, and we will have settled the whole South American commercial question at one stroke." Colonel E. H. Ropes, president of the Port Aransas Co., of Corpus Christi, is also president of the Corpus Christi & South America Railway Co.

During the month of April the Louisville & Nashville earned \$496,548 net, or \$52,000 more than April 1889. The net earnings for the past ten months were \$6,295,106, against \$5,332,200 last year. A rumor is afloat that the company will issue a general mortgage of \$50,000,000 to take up underlying bonds as they come due, and to provide a surplus for improvements, extensions, etc.

Railroad Construction

Americus, Ga.—Street Railroad.—The Americus Manufacturing & Improvement Co. includes as a part of its plan mentioned last week the construction of street railroads, and providing terminal facilities for railroads building into Americus.

Arcadia, Fla.—Railroad.—It is stated that the Savannah, Florida & Western Railroad Co. (office, Savannah, Ga.) will construct a railroad to the Gulf of Mexico via Peace river.

Asheville, N. C.—Street Railroad.—The Asheville Street Railroad Co. has secured permission to extend its line to Biltmore.

Asheville, N. C.—Railroad.—E. Baid is president of the company mentioned last week as being organized to construct a dummy or electrical railroad to Weaverville.

Baltimore, Md.—Electrical Railroad.—The Baltimore, South Baltimore & Curtis' Bay Railway Co., previously reported as incorporated, has elected Wm. S. Rayner, president, and W. C. Pennington, secretary. The company contemplates constructing an electrical railroad to Curtis' Bay, a distance of four or five miles; capital stock \$50,000.

Beattyville, Ky.—Belt Railroad.—The Three Forks Belt Railroad Co., lately mentioned as incorporated, is organized to construct a belt railroad to Three Forks City, mentioned elsewhere in this issue.

Beebe, Ark.—Railroad.—The Beebe, Des Arc & Brinkley Railroad, lately mentioned, will be built this fall. F. P. Laws, general manager, can give information.

Big Stone Gap, Va.—Railroad Tunnel.—The Interstate Tunnel Co. is being organized for the purpose of constructing two tunnels through the Big Black and Pine mountains, near Big Stone Gap; cost will be about \$2,500,000, it is said. H. W. Huidekoper, John R. Proctor and Rufus A. Ayers are interested.

Brackettville, Texas.—Railroad.—The Brackett, Fort Clarke & Rio Grande Railroad Co., previously reported as organized, has been reorganized with B. H. Gardner, president.

Braidentown, Fla.—Railroad.—Surveys have been completed on the railroad projected by the Manatee & Savasota Railway & Drainage Co., and construction will, it is stated, be commenced by September 1.

Brunswick, Ga.—Railroad.—The South Brunswick & Calahan Railroad Co. has applied for charter for the purpose of constructing a railroad from South Brunswick to Calahan, Fla. James B. Scott, Henry R. Symons, John E. du Bignon, J. M. Madden are interested.

Clarksdale, Miss.—Railroad.—Track-laying will, it is stated, be commenced shortly on the branch previously noted, of the Louisville, New Orleans & Texas Railroad (company's office, Memphis, Tenn.), extending to Minter City.

Columbus, Ga.—Railroad.—The Alabama, Georgia & Florida Railway Co. is the name of the

company lately mentioned as incorporated to construct a railroad from Quincy, Fla., to Birmingham, Ala., via Cuthbert and Columbus, Ga., and Jernigan, Ala. G. Gunby Gordon, of Columbus, and H. R. Duval, of Jacksonville, are interested.

Corpus Christi, Texas.—Railroad.—The Iowa Southern Improvement & Investment Co. has secured contract for the construction of the Corpus Christi & South America Railway, lately referred to, from Corpus Christi to Brownsville, 150 miles distant.

Dallas, Texas.—Electrical Railroad.—The Dallas Rapid Transit Co., previously referred to, expects to construct about five miles of electrical railroad this summer, to be equipped with the Sprague system.

Denton, Md.—Railroad.—Caroline county has accepted the proposition of the Pennsylvania Railroad Co. (office, Philadelphia, Pa.) to build and equip a railroad 22 miles long from the Chesapeake & Delaware Canal with the Cambridge & Seaford Railroad, providing the county invest \$60,000 in the enterprise.

Gainesville, Ga.—The Georgia Development Co. has, it is stated, purchased the charter of Gainesville & Hall County Street Railroad Co., and will construct a dummy railroad to the Oconee White Sulphur Springs, which it is said to have purchased. John Martin, of Canton, or T. J. Cheney, of St. Louis, Mo., can give information.

Greenville, S. C.—Electrical Railroad.—A company has been granted franchise for the construction of an electrical railroad and erection of electric plant to cost \$300,000. This is possibly the same company mentioned several weeks ago.

Greenville, S. C.—Dummy Railroad.—The Greenville Dummy Railroad Co., previously mentioned, has secured right of way for the construction of its dummy railroad.

Louisville, Ky.—Elevated Railroad.—The Louisville & Nashville Railroad Co. has made a proposition to the city of Louisville to construct an elevated roadway for a short distance in the city.

Lynchburg, Va.—Street Railroad.—The Elliott Farm Co. is considering the construction of a street railroad, it is stated.

Macon, Ga.—Railroad.—J. S. McTigh & Co. state that on June 15 they will commence to let contracts for the construction of 200 miles of railroad in Georgia. Profiles and specifications can be seen at their Macon office or at their office with Toof, McGowan & Co., 271 Front street, Memphis, Tenn.

Marion, N. C.—Electrical or Dummy Railroad.—The Marion Street Railway & Hotel Co. has been organized with \$100,000 capital stock and will construct a street railroad 1½ miles long, to be operated by electrical or gas motors.

New Orleans, La.—Belt Railroad.—The New Orleans Union Railway Co. has been chartered for the purpose of constructing, operating and owning a belt railroad. John A. Grant, general manager Texas & Pacific Railway Co.; A. C. Hutchinson, general manager Atlantic System Southern Pacific Co.; Charles Schiff, president Queen & Crescent Route; John G. Mann, superintendent Southern Line of the Illinois Central Railroad Co.; J. T. Harahan, general manager Louisville, New Orleans & Texas Railway Co.; J. Kruttschmitt, John Glynn, Jr., and E. B. Kruttschmitt are the incorporators; capital stock \$250,000.

Ocala, Fla.—Railroad.—It is said that the South Florida Railroad Co. (office, Sanford) will construct a branch road through Ocala.

Orange, Texas.—Railroad.—The Gulf & Northwestern Railroad Co. has made a proposition to Orange to construct its projected road from Orange to such Northern connection as may be practicable, location of line to commence within 90 days, and to locate shops and offices at Orange, provided that Orange give free right of way through city and county of Orange 100 feet wide, exemption from all taxes levied or to be levied by the city of Orange for 10 years, and \$50,000 in four equal installments as the line progresses.

Paducah, Ky.—The Paducah, Tennessee & Alabama Railroad Co. will hold a stockholders' meeting on August 5 for the purpose of authorizing and voting upon a proposition to consider the issuance of bonds to an amount not exceeding \$30,000 per mile, to be secured by a first mortgage on all its property.

Rio Grande City, Texas.—Railroad.—The city has decided at mass meeting to subscribe \$30,000 bonus, lately mentioned, to the Corpus Christi & South America Railway Co.

Waco, Texas.—Dummy Railroad.—The Waco Dummy Street Railway Co. has secured right of way for the construction of its dummy railroad, previously referred to.

Wadesboro, N. C.—Wadesboro has, it is stated, decided to subscribe \$40,000 to the Roanoke & Southern Railroad Co.

Wadley, Ga.—Railroad.—The Wadley & Mt. Vernon Railroad Co. will extend its road to Mt. Vernon as rapidly as practicable. F. M. Fremont, vice-president, Atlanta, can give information.

No Objection to Honest Criticism.

The American Wool Reporter, Boston, announces that it will begin this week the publication of "a series of critical articles on The 'Boom Towns' of the South." Assuming that it is the purpose of the Reporter to present an honest, truthful and impartial critical analyses of the industrial conditions prevailing at the South, its work will constitute a valuable advertisement of the section. The South has within itself a combination of the elements of industrial development and expansion and general prosperity and well-being such as no other part of this country and probably no other part of the world possesses, and the more prominently and widely the South can be kept before the notice of the world, the more rapid will be its upbuilding. If, among the industrial and development enterprises seeking to utilize and profit by the resources of Southern localities in raw material, fuel, soil and climate, there are instances of bad management, of injudicious selection of locality, of dishonest schemes (and there unquestionably are), then it can accomplish only good to have them pointed out. The South welcomes honest criticism.

KIMBALL'S SALE.

The Magic of the Name is Manifest.

Interest in the Town, as Shown in Initial Sales, Beyond any Expectation.

[Special to MANUFACTURERS' RECORD.]

CHATTANOOGA, June 10, 1890.

The first day's sale has been a great success. An enthusiastic crowd of people, strong in the business and financial world, and from many States, has gathered here. A heavy rain broke up the sale for several hours, but lots to the value of \$200,000 were sold. The plan outlined in my letter worked admirably. Hundreds are camped here to-night awaiting Wednesday's sale. Large parties are en route and will arrive before morning. A great pyrotechnic display is in progress.

THE Universal Electric Railway Signal Co., of Richmond, Va., is the owner of a patented signal apparatus, and on Saturday last held a practical test of it at Ivy City, near Washington, on the Baltimore & Ohio Road. The company had fitted up about three miles of track, on which were two trains, each consisting of a locomotive and one car. A telephone with a small electrical gong attached was placed in each car and insulated wires extended into the engine, where one was connected with the metal of the engine and the other with a brush of copper wires so arranged beneath the locomotive as to be kept by a small spiral spring in continual contact with an iron rod or conductor which had been laid in the center of the track raised by insulators to a distance of about three inches above the cross-ties. The trains were started at either end, both going at full speed, and, notwithstanding the latter fact, conversation was easily carried on by telephone. When the trains were within two

miles of each other the hammer on the gongs began to vibrate, and shortly after the gongs commenced to ring. It is intended in practical work to have the whole apparatus carried in the cab of the engine, so that the ringing of the bell will warn the engineer that another train is ahead of him, when he can switch his telephone into connection with that of the other train and direct it to stop or side-track. More than all this, the apparatus will give warning of an open switch, spread rail or sunken track when the train is a mile to a mile and a-half distant. With this apparatus it would seem that railroad accidents should be reduced to a minimum, as it places no responsibility or work upon the operator in the telegraph station, as is now the case, but makes the trains independent of all foreign agencies, so they can warn each other while running at full speed. Conversation is much more plainly heard with these telephones than with ordinary ones where ground circuits are used, owing to the fact that the engine wheels and the rails form an all-metallic circuit.

THE Middle Georgia & Atlantic, Colonel Machen's road, is now well under construction. The company has about 1,800 men at work, and track will probably be laid into Eatonton within the next two weeks.

Southern Financial News.

NEW BANKS.

Bessemer, Ala.—The Bessemer Savings Bank has been organized by J. N. Carpenter, T. J. Cornwell and others and will, it is stated, erect a building; capital stock, \$100,000.

Bessemer, Ala.—It is said that another savings bank will be organized. John N. Jenkins and Gen. West are said to be interested.

Fort Meade, Fla.—A branch of the Southern Mortgage, Loan & Trust Co. will, it is stated, be organized with A. A. Parker, president.

Graham, Texas.—J. R. Hoxie, of Fort Worth, and associates have applied for authority to organize the First National Bank of Graham.

Grenada, Miss.—The Grenada Bank has been organized by J. W. Griffin, J. T. Thomas and others; capital stock not less than \$30,000 or more than \$200,000.

Hickory, N. C.—D. P. Shuler and others have applied for permission to organize the First National Bank of Hickory.

Hickory, N. C.—The Citizens' National Bank will, it is stated, shortly be organized with \$50,000 capital by D. C. Waddell, V. E. McBee, W. W. Barnard and others.

Jacksonville, Fla.—The Merchants' National Bank has been authorized to commence business with \$150,000 capital.

Macon, Ga.—A guarantee company will, it is stated, be organized with \$50,000 capital.

Orangeburg, S. C.—The Orangeburg Investment Co. has been chartered with \$15,000 capital stock. L. H. Wannamaker, G. W. Brunson and others are interested.

Riverton (P. O., Chickasaw), Ala.—A bank has been organized. A. J. Minard is cashier.

Roanoke, Va.—The National Investment Co. has been organized with George W. Ramsay, president, and H. W. Crowl, secretary and treasurer; capital stock not less than \$20,000 or more than \$100,000.

Rutledge, Ky.—The Silver Cliff Bank, previously mentioned, has been organized, it is stated.

Waco, Texas.—The Central City Loan & Investment Co. has been chartered by J. I. Moore, T. F. Jones and Barney Pearlstone; capital stock, \$100,000.

Americus, Ga., will hold an election on July 10 to decide upon the issuance of \$25,000 of bonds to extend the water works. The mayor can give information.

Brunswick, Ga., has decided to issue the \$300,000 of 30-year sewerage bonds lately mentioned.

Fisher & Shaw, bankers, Baltimore, Md., offer for sale \$100,000 city of Chattanooga 30-year 5 per cent. bonds for street improvements and sewerage, previously referred to.

Fort Worth, Texas, has sold \$193,000 of water works and school bonds, previously referred to, to S. A. Kean & Co., of Chicago, Ill.

Frostburg, Md., offers for sale \$20,000 of 4½ per cent. city bonds. Address Enoch Cline, mayor, for information.

Gainesville, Ga., has decided to issue the \$40,000 of bonds, lately mentioned, for electric light and water works. George K. Looper, mayor, can give information.

J. J. Nicholson & Sons, bankers, Baltimore, Md., offer for sale \$15,000 city of Danville, Va., 5 per cent. bonds, \$25,000 Clarke county, Va., 5 per cent. bonds.

John E. Bailey, secretary Galveston Wharf Co., Galveston, Texas, will receive bids until June 27 for the purchase of \$100,000 of 50-year 5 per cent. bonds.

Richmond, Va., may issue \$450,000 of 4 per cent. bonds. The city finance committee has recommended it to the city council.

San Antonio, Texas, has decided by popular vote to issue the \$250,000 of public improvement bonds lately mentioned.

The Baltimore Dry Dock Co., of Baltimore, Md., have declared a dividend of 6 per cent.

The Charleston Electric Light & Power Co., Charleston, S. C., has declared a dividend of 75 cents per share.

The Georgetown Water Co., Georgetown, Ky., has given a mortgage for \$35,000 to the Fidelity Trust & Safety Vault Co., of Louisville.

The Mobile and Girard Railroad Co. has declared a dividend of \$1.50 per share, payable at office of Central Railroad & Banking Co., Columbus, Ga.

The Newport News Ship-building & Dry Dock Co., Newport News, Va., will hold a stockholders' meeting on June 19 to consider the increase of capital stock to the sum of \$2,000,000.

The Paducah, Tennessee & Alabama Railroad Co. will hold a stockholders' meeting at Paducah, Ky., on August 5 for the purpose of considering the issuance of bonds not exceeding \$30,000 per mile to be secured by a first mortgage on company's property.

The Real Estate Title Insurance Co., of Washington, D. C., has declared a dividend of \$3.00 per share, payable July 1.

The Richmond, Fredericksburg & Potomac Railroad Co. (office, Richmond, Va.) has declared a dividend of 3½ per cent., payable July 1.

Thom & Whiteley, Baltimore, Md., offer for sale \$60,000 of the Americus (Ga.) Light & Power Co.'s 6 per cent. bonds.

Richmond Stock Exchange Quotations.

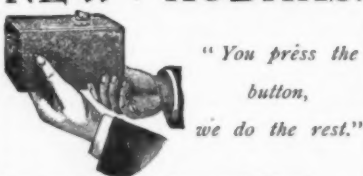
Reported by JOHN L. WILLIAMS & SON, Bankers, Richmond.

RICHMOND, VA., June 10, 1890.

	BID.	ASKED.
North Carolina 4's, 1910.....	99½	
North Carolina 6's, 1910.....	124	126
Virginia New 3's, 1933.....	68½	
Lynchburg, Va., 5's, 1915.....	104	
Petersburg, Va., 5's, 1915.....	103½	
Norfolk, Va., 5's, 1911.....	104	
Richmond, Va., 5's, 1922.....	112	
Atlanta & Charlotte Ry., 1st 7's, 1907.....	122½	
Atlanta & Charlotte G'd 6's, 1900.....	104	
Char., Col. & Aug. R.R. Gen. 6's, 1932.....	110	
Georgia Pacific Ry., 1st 6's, 1922.....	113	
Georgia Pacific 2d 5's, 1923.....	79	
Ga. Pacific Income, 5's.....	30	
Petersburg Railroad Class A 5's, 1926.....	105	
Petersburg Railroad Class B 6's, 1926.....	108	
Rich. & Danville R. R. Gold 6's, 1915.....	116	
West. N. Car. R. R. Gen. 6's, 1914.....	93½	
Northwestern N. Car. R. R. 1st 6's.....	101	
Atlanta & Charlotte R. R. Stock.....	93	
North Carolina Railroad Stock.....	103	
R. F. & Pot. R.R. Div'd Obligations.....	113½	
Norfolk Midland Railway Stock.....	53	
Sloss Iron & Steel Co. Stock.....	40	
Sloss Iron & Steel Co. 1st 6's.....	90	
Sloss Iron & Steel Co. 2d 6's.....		

SEALED PROPOSALS will be received at the office of the Supervising Architect, Treasury Department, Washington, D. C., until 2 o'clock P. M. on the 21st day of June, 1890, for furnishing and delivering at freight depot in city where required, fire-proof safes, &c., required for the U. S. Government buildings at the following cities: Atlanta, Ga., Augusta, Me., Cleveland, O., Columbus, O., Concord, N. H., Des Moines, Ia., Jackson, Tenn., Knoxville, Tenn., Kansas City, Mo., Lincoln, Neb., Lexington, Ky., Minneapolis, Minn., Newark, N. J., New Haven, Conn., Oshkosh, Wis., Omaha, Neb., Reading, Pa., St. Paul, Minn., Shreveport, La., Toledo, O., and Utica, N. Y., in accordance with the specification, copies of which may be had on application at this office. Bids for one or all the safes required must be accompanied by a certified check for \$100. The Department will reject all bids received after the time fixed for opening the same; also, bids which do not comply strictly with all the requirements of this invitation. Proposals must be sealed and endorsed "Proposals for Safes for Government Buildings," and addressed to JAS. H. WINDRIM, Supervising Architect. June 10th, 1890.

NEW KODAKS.



Seven New Styles and Sizes
ALL LOADED WITH Transparent Films.
For Sale by all Photo. Stock Dealers.
THE EASTMAN COMPANY,
Send for Catalogue. ROCHESTER, N. Y.

ALEX. BROWN & SONS

ESTABLISHED 1811.

Cor. Baltimore and Calvert Streets,
BALTIMORE, MD.

BROWN BROTHERS & CO.

New York, Philadelphia and Boston.

Foreign and Domestic Bankers,

AND MEMBERS OF THE

Baltimore, New York and Philadelphia
Stock Exchanges.

(Private wire between Baltimore, Boston,
Philadelphia and New York.)

Interest allowed on deposits of
Banks, Bankers, Corporations and in-
dividuals (by agreement). Railroad,
Municipal & other Loans Negotiated.

BUY AND SELL BILLS OF EXCHANGE

on Great Britain and Ireland, France, Germany,
Holland, British West Indies and other foreign
points.

Issue Commercial and Travelers' Letters of Credit.

IN STERLING, available in any part of the
world; and IN DOLLARS, for use in this
country, Canada, Mexico, the West Indies and
South America.

Make Cable and Telegraphic Transfers
of Money.

Drafts Collected in all parts of the World.

BROWN, SHIPLEY & CO., LONDON.

Foreign Exchange Quotations.

ALEXANDER BROWN & SONS.

BALTIMORE, June 11, 1890.

Sterling.—		Commercial.
60 days.....	485½	483¾@484¼
3 days.....	488	
Francs.—		Commercial.
60 days.....	517½	520½@521¼
3 days.....	515½	
Reichmarks.—		Commercial.
60 days.....	95¼	60 days..... 94¼
3 days.....	95½	3 days..... 94½
Gulders.—		Commercial.
60 days.....	40½	60 days..... 39½
3 days.....	40¾	3 days..... 40

Baltimore Stock Exchange Quotations.

Reported by ALEXANDER BROWN & SONS, Bankers, Baltimore.

BALTIMORE, June 11, 1890.

	BID.	ASKED.
Virginia 6's Consols C.....	54	
Virginia 3's, new.....	68	
Virginia Consul Coupons, N. F.....	26	28
N. Carolina 4's.....	100	
Norfolk Water 3's, C.....	130	
Baltimore & Ohio.....	105	
Central Ohio 6's.....	53	55
Atlanta & Charlotte.....	93	93½
B. & O. Extended 4's.....	100½	
Pitts. & Con. 1st 7's.....	116	
Northern Central 6's.....	116½	117
Northern Central Gold 6's C 1900.....	118	118½
Ga. R. & N. 5's.....	103½	
Central Ohio 6's.....	101½	101½
Cin. Wash. & B. (En B. & O.) 1st 4½'s.....	101½	
Cin. Wash. & B. (En B. & O.) 2d 5's.....	67	75
Ohio & M. 1st Div. 7's.....	114½	
Ohio & M. 5's.....	97	
Atlanta & Char. 1st 7's.....	123	
Va. Midland, 1st 6's.....	118	
Va. Midland, 2d 5's.....	109	
Va. Midland, 3th 5's.....	101	102
West Va. Central 1st 6's.....	110½	111
Ga. Pacific 2d.....	78½	79
West. N. Car. Cons'd 6's Gld.....	103	
Cape Fear & Y. Valley 6's, A.....	105½	105½
Cape Fear & Y. Valley 6's, B.....	103	
Cape Fear & Y. Valley 6's, C.....	103½	
Consolidated Gas Stock.....	53½	
Consolidated Gas Bonds 6's.....	115½	
Canton Co.....	54	
N. Orleans Gas 1st 5's various J & I.....	104	

JOHN L. WILLIAMS & SON, BANKERS,

RICHMOND, VA.

Our MANUAL OF INVESTMENTS, the largest publication of the kind published by any banking house in the United States, may be had upon application by parties interested.

ADDITIONAL CAPITAL SECURED

For Manufacturers and Others.

Business Properties Negotiated. Eastern and Foreign connections for large undertakings. Correspondence solicited. Address, enclosing stamp, JNO. D. McFARLAND, Gibson House, Cincinnati, Ohio.

C. J. BEATTIE, LAWYER,

204 Dearborn Street, Chicago, Ill.

Thirty-three years' successful practice in the State and Federal Courts. Cases conducted quietly without gossip or scandal. Counsel free.

SOUTHERN STOCKS.

OFFICIAL QUOTATIONS BIRMINGHAM STOCK EXCHANGE.

Corrected Weekly by MARTIN & LEEDY, Stock and Bond Brokers, and Members
Birmingham Stock Exchange.

SATURDAY, JUNE 7, 1890.

STOCKS.		Capital	Par	LAST DIVIDEND.				
BANKS.		Organized.	Stock.	Value.	Declared.	Per Cent. on Stock.	Bid.	Asked.
Alabama National	1886	\$500,000	100	Jan. '90	a 4	110	115	
American National	1887	250,000	100	Jan. '90	a 4	101	101	
Bank of Atlanta	1889	50,000	100	Jan. '90	a 5	75	75	
Borsey National	1886	300,000	100	Jan. '90	a 5	129	130 1/2	
Birmingham National	1887	250,000	100	Jan. '90	a 3	96	96	
Central Savings	1889	50,000	100	Jan. '90	....	100	....
City National	1889	100,000	100	Jan. '90	....	180	210
First National	1884	250,000	100	Jan. '90	a 6	186	....
First National Bank of Gadsden. ...	1837	50,000	100	Jan. '90	a 6	....	130
Jefferson County Savings	1885	150,000	100	Jan. '90	a 6	....	155
Birmingham Trust & Savings Co.	1887	500,000	100	Jan. '90	a 3	107	111	
Mutual Loan & Trust Co.	1888	50,000	100	Jan. '90	1 15 E	100	103	
People's Savings Bank & Trust Co.	1888	50,000	100	Jan. '90	a 4	109 1/2	....
RAILROADS.								
Birmingham Union Railway Co.	1887	1,000,000	50	....	....	25	50
Birmingham & Ensley Railway Co.	1887	500,000	50	....	....	25	....
North Birmingham Street R. R.	1887	65,000	50	....	....	50	....
Highland Avenue & Belt R. R. Co.	1887	1,000,000	100	....	....	25	....
South & North Alabama R. R. Co.	1887	....	..	....	....	45	....
MISCELLANEOUS.								
Anniston City Land Co.	1887	3,000,000	100	July, '87	q 4	58 1/2	61	
Alabama Coal & Iron Co.	1890	1,000,000	100	....	....	119	....
Alabama-Connelly's Coal & Coke Co.	1886	500,000	100	....	....	23	....
Alabama Rolling Mill Co.	1887	250,000	100	....	....	60	....
Bessemer Land Co.	1887	2,500,000	100	May, '87	q 2 1/2	37 1/2	....
Birmingham Mining & Mfg. Co.	1887	150,000	100	Mch. '87	q 3 1/2	....	83
Birmingham-Ensley Land Co.	1886	450,000	100	....	....	6	....
Birmingham Water Works Co.	1887	500,000	100	....	....	78	....
Birmingham Furnace & Mfg. Co.	1886	1,500,000	100	....	....	16	....
Cahaba Coal Mining Co.	1886	1,400,000	100	....	....	70	....
Chattanooga East End Land Co.	1887	4,000,000	100	....	....	15	25
DeBardeleben Coal & Iron Co.	1886	4,000,000	100	....	....	77 1/2	79
Decatur Land Imp. & Furnace Co.	1887	5,000,000	100	....	....	13 1/2	....
Decatur Mineral Land Co.	1887	350,000	100	Oct., '87	q 3	....	22 1/2
Elyton Land Co.	1871	200,000	100	Nov. 10, '87	***	850	....
Edison Electric & Illuminating Co.	1886	100,000	100	July, '89	a 4	....	102
East Birmingham Land & R. R. Co.	1886	1,022,800	100	....	....	11 1/2	....
East Lake Land Co.	1886	200,000	100	June, '87	n 50	....	80
Ensley Land Co.	1886	10,000,000	100	....	....	11	....
Enterprise Manufacturing Co.	1886	100,000	100	....	....	22 1/2	34 1/2
Eureka (Furnace) Co.	1886	....	....	....	....	130	300
Florence Land & Mining Co.	1886	3,000,000	100	April, '89	1	....	22
Gadsden Land Co.	1887	3,000,000	100	April, '87	q 1	6	6 1/2	
Gate City Land Co.	1887	....	....	....	....	24	....
Hedra Coal Co.	1888	300,000	100	....	....	30	....
Henderson Steel & Mfg. Co.	1887	100,000	100	....	....	75	87
Jefferson Building & Improvement Co.	1887	150,000	100	....	....	65	....
Jagger-Townley Coal & Coke Co.	1887	350,000	100	....	....	9 1/2	10 1/2
Leeds Land Co.	1887	150,000	100	....	....	52	62
Mag Ellen Coal & Mining Co.	1887	100,000	100	....	....	100	....
Mary Lee Coal & Railway Co.	1888	500,000	100	....	....	20	....
North Birmingham Land Co.	1886	700,000	100	....	....	37 1/2	....
Smithfield Land Co.	1886	850,000	100	....	....	30	1 1/2
Sloss Iron & Steel Co.	1887	4,000,000	100	....	....	43	....
South Anniston Land Co.	1887	750,000	100	Sept. '89	h 1	15	18	
Sheffield Coal & Iron Co.	1881	1,000,000	100	Mch. '87	x 5	58	....
Thompson Brick Co.	1887	20,000	100	Feb. 84	x 5	....	100
Tennessee Coal & Iron Co.	1867	9,000,000	100	May 15, '87	....	104	106
Tennessee Coal & Iron Co., pref.	1867	1,000,000	....	....	....	24	27
Tuskaloosa Coal, Iron & Land Co.	1887	1,000,000	....	....	....	30	....
Vulcan Coal & Coke Co.	1886	100,000	100	....	....	50	....
West End Land Co.	1886	175,000	100	....	....	41	....
Woodstock Iron Co.	1887	3,000,000	100	....	....	....	....

BONDS.	Amount	INTEREST.	Bid.	Asked.
Outstanding.	Rate Per Cent.			
Alice Furnace	300,000	7	103	....
Birmingham Gas & Electric Light Co.	340,000	8	....	92
Birmingham Union Railway Co.	500,000	6	92 1/2	100 1/2
Birmingham Water Works	400,000	6	107 1/2	....
Cahaba C. & M. Co., 1st Mortgage	750,000	7	111	116
Caldwell Hotel	150,000	6	97	....
Elyton Land Co., Trust Bonds	2,400,000	6	98 1/2	99 1/2
Eureka (Furnace) Co.	400,000	7	109 1/2	....
Henderson Steel & Mfg. Co.	50,000	8	....	....
Mary Pratt Furnace	100,000	7	106	....
Sloss Iron & Steel Co., 1st Mortgage	2,000,000	6	93 1/2	94
Tennessee Coal, Iron & R. R. Co.	2,000,000	6	....	78
Williamson Iron Co.	50,000	8	100	105
Tennessee Division	1,254,000	6	96 1/2	....
Birmingham Division	3,640,000	6	100	....

EXPLANATION.—a—For six months. q—Only dividend declared since organization. x—This company declared 5 per cent. February 1 also. z—Total dividends paid, 49 per cent. [—Dividend for one year, ending July 1, 1889. E—Sold hereafter Ex. 15 per cent. dividend. o—Dividend 5 per cent. paid in May, '87, also October 1. n—Fifty per cent. dividend on Union R. R. Stock. h—Payable October 15, 1889. f—A 5 per cent. dividend has been paid quarterly since organization. w—For dividends refer to the company. * May 6, '87, 50 per cent. cash; May 10, '87, 50 per cent. cash; Sept. 14, '87, 50 per cent. cash; Oct. 10, '87, 10 per cent. cash; Nov. 10, '87, 10 per cent. cash; Nov. 10, '87, 1200 per cent. in Elyton Land Company's Trust Bonds.

The Southern Investment Co.

J. J. BURNS, Manager.

167 DEAR ORN STREET, CHICAGO, ILL.

BUY AND SELL

Southern Real Estate,

CITY AND TOWN PROPERTY.

Mineral and Timber Lands,
Mines, Mills, Furnaces

and Factories.

COLONIES ESTABLISHED.

Correspondence Solicited.

DESKS,
Chairs,
Office FurnitureSEND FOR CATALOGUE.
DERBY & KILMER DESK CO.Salesrooms,
opp. Lowell Depot,
30 Causeway St., Boston.

The American Wool Reporter,

The Leading Textile and Financial Newspaper of the
United States, will begin its issue of

THURSDAY, JUNE 12,

A Series of Critical Articles upon

The "Boom Towns"
of the South.As nearly everything which is being written
upon this subject at the present time is favorable,
we think a fair presentation of the matter re-
quires that it should be viewed also from the un-
favorable side.In accordance with our usual custom in analyzing
investments which are offered to the dear
public, THE REPORTER will particularize com-
panies, places and individuals.

THE AMERICAN WOOL REPORTER,

\$2.00 per annum. Single copies 5 cents.

19 Pearl Street, Boston. 51 Leonard Street, New York.

241 Chestnut Street, Philadelphia.

P. J. GOODHART & CO.

(Members of the New York Stock Exchange.)

24 BROAD STREET, NEW YORK.

Orders executed in New York and Boston for
buying and selling stock of the

Anniston City Land Co.

We are prepared to carry same on
\$10 per share MARGIN.

We make a specialty of all

Southern Securities.

FREDERIC TAYLOR & CO.

Bankers and Brokers,

84 BROADWAY,
NEW YORK CITY.

Members of the New York Stock Exchange.

WILSON, COLSTON & CO.

[Members of Baltimore
Stock Exchange.]

BANKERS,

216 East Baltimore Street, Baltimore, Md.

Investment and Miscellaneous Securities a specialty, and large lines handled. Exceptional facilities for
dealings in all classes of Southern Bonds. Loans on Collateral Securities negotiated. Quotations and
information furnished on application, and correspondence invited.

J. WM. MIDDENDORF,

Members Baltimore Stock Exchange.

WM. H. OLIVER.

MIDDENDORF, OLIVER & CO.

BANKERS AND BROKERS,

No. 213 E. German Street, [KEYSER BUILDING.] Baltimore, Md.
Stocks and Bonds Bought and Sold on Commission. Special attention given to Municipal and other Invest-
ment Loans. Dealers in Foreign Exchange. Drafts on Europe and Letters of Credit furnished.

Southern Railway Construction Co.

CAPITAL \$500,000.

Organized for the special purpose of negotiating Southern Railway Bonds and General Securi-
ties, and the building of Railroads, Water Plants and other Public Works. Offices: New York,
57 Broadway; Chattanooga, Tenn., Richardson Building; Louisville, Ky., 27 Fifth Street.

GENERAL OFFICE, CHATTANOOGA, TENN.

Gov. John B. Gordon, Georgia, President; Chas. O. Beebe, Lynn, Mass., ad Vice-President; Chas.
A. Brooks, New York, 1st Vice-President; Roland C. Cook, Chattanooga, Tenn., Secretary and
Treasurer; Chas. E. Danforth, New York, General Manager.

MONEY FOR MANUFACTURERS.

Any manufacturer desiring to
change the location of his plant or establish a new one, will be given
a fine site with unsurpassed advantages, and also advanced a liberal
amount of cash, subject only to a satisfactory examination. This offer
is bona fide, and only principals will be dealt with. Address

WEST LYNCHBURG LAND CO., Lynchburg, Va.

NOW READY.

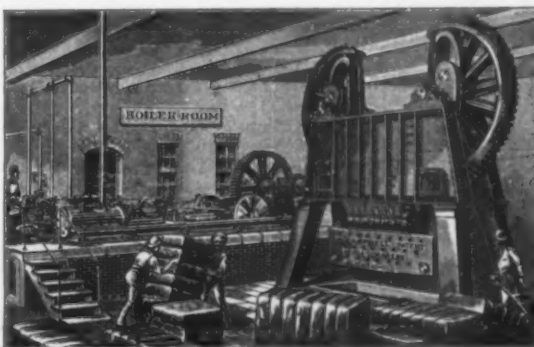
The third annual edition of the BLUE BOOK, a Directory of the Textile Manufacturers
of the United States and Canada, comprising Cotton, Woollen, Silk, Jute and Linen Manufacture,
Dyers, Bleachers and Print Works, Dry Goods Commission Merchants, Treasurers' Offices, Cl.
Offices and Salesrooms of Manufacturing Companies, etc. It gives the name of Place, County,
Railroad, Telegraph and Express, name of Proprietor or Company Officers, Mill Agent and Superin-
tendent, number of Cards, Combs, Looms, Spindles, Knitting and Sewing Machines, Boilers and
Water-wheels. If Dye House or Color Tub. Specialty and full description of Goods made, name of
Selling Agents or if sell own goods wholly or partly, and if to Wholesale, Retail or Jobbers. If
buy yarn + ind used. A list and full particulars of all New Mills under construct-
ion with expected date of completion, etc. Handsomely and compactly printed in
medium sized type one third the price of the large directories. The cheap-
est and most complete book published; a Reliable Ready Reference Book for the
Office, and its size, 7 1/2 x 4, is convenient for the Traveling Salesman.

Prices, Postpaid, Bound in Cloth, \$2.00; Russia Leather, \$2.50.

J. E. PALMER & CO., 176 Broadway, New York.

THE CAMPBELL COTTON COMPRESS

Is sold on the following GUARANTEE:

DENSITY Obtained
Equal to Any.
COST of Plant Less
Than Any.
EXPENSE of Running
Half of Any
First-Class Compress.

Correspondence Solicited.

The Campbell Cotton
Compress Co.

109, 111, 113 & 115 E. Front St.

CINCINNATI, O.

CONSTRUCTION DEPARTMENT.

WE PUBLISH, every week, a list of every new factory, of whatever kind, projected anywhere in the South; every railroad undertaken, and every mining company organized. This information is always fresh, and, by enabling manufacturers to correspond with the projectors of such enterprises before their supplies of machinery have been purchased, is of great value. Manufacturers will find it to their interest to read this department carefully each week.

*Means machinery is wanted, particulars of which will be found in "Machinery Wanted" columns.

In correspondence relating to matters reported in this paper, it will be a favor if it is stated that the information was gained from the MANUFACTURERS' RECORD.

ALABAMA.

Avondale-Iron Works.—The Avondale Iron Works has put in machinery for the manufacture of railroad car links.*

Bessemer-Pipe Works.—The pipe works lately reported as to be built, will be operated by the Howard-Harrison Iron Co., which is to be organized with a capital stock of \$500,000.

Bessemer-Mineral Wool Factory.—The mineral wool factory mentioned in last issue, is operated by the Bessemer Mineral Wool Manufacturing Co.

Birmingham-Machine Shop, etc.—The Birmingham, Powderly & Bessemer Street Railroad Co. will rebuild its machine shop and round-house reported in last issue as burned.

Birmingham-Ice Factory.—The People's Ice Manufacturing Co., recently reported as incorporated to erect an ice factory, has elected J. W. Fulgham, president, and P. T. Muller, secretary.

Blount-Coal Mines.—Negotiations are pending for the lease of the coal lands belonging to the State University, located near Blount.

Coaldale-Brick and Tile Works.—The Coaldale Brick & Tile Co. has, it is stated, put in new machinery.

New Decatur—Electric-light Plant.—The Decatur Electric Light & Power Co. is reported as to put in a new dynamo.

New Decatur-Timber Lands.—It is stated that L. Creighton has purchased timber lands near New Decatur and will develop.

Piedmont-Foundry and Machine Shop.—The Piedmont Machine & Foundry Co. is the name of the company recently mentioned as to erect foundry and machine shop and has, it is stated, awarded contract for building.

Renfro-Shingle Mill.—Rogers & Wallace have erected a new shingle mill.

Seale-Fertilizer Factory.—It is proposed to establish a fertilizer factory in connection with the projected cotton seed oil mill lately mentioned.

Selma-Electric-light Plant, &c.—The Matthews' Cotton Mill Co. is reported as putting in electric-light plant.

Sheffield-Brick-yard.—Jones & Newport, of Memphis, Tenn., will probably start a brick-yard.

Sheffield-Carriage Factory.—A La Rock will start a carriage factory, as stated in last issue.

Thomas-Pipe Works.—The Pioneer Mining & Manufacturing Co. will, it is reported, build pipe works.

Warrior-Chair Factory.—L. C. Harrison & B. F. Rouse will, it is reported, erect a factory for the manufacture of the Gage patent folding chair.

York Station-Cotton Press Factory.—The Crews Cotton Press Manufacturing Co. has been organized to manufacture the Crews cotton press.

ARKANSAS.

Batesville-Chair Factory.—J. T. Hartsfield has, it is reported, started a chair factory.

Bear-Smelting.—The Electro-Chemical Amalgamating Co., lately referred to, (under Hot Springs) has an experimental plant in operation in Bear.

Farmington-Flour Mill.—The Farmers' Alliance & Industrial Union Milling Co., of Washington county, has been incorporated with a capital stock of \$5,500.

Hazen-Creamery.—A stock company has, it is stated, been organized to erect a creamery.

Little Rock-Electric-light Plant.—G. H. Van Etten purchased the plant of the Edison Electric Light Co. as reported in last issue.

Mammoth Springs-Stone Quarry.—It is stated that a stone quarry has been opened near Mammoth Springs.

Morrilton-Oil Mill.—The erection of a cotton-seed oil mill is projected. Beal & Wills can give information.*

Pine Bluff-Cotton Compress.—The Standard Compress & Warehouse Co., recently mentioned, has, it is reported, increased capital stock to \$322,000.

FLORIDA.

Apalachicola-Sash, Door and Blind Factory.—S. J. Johnson contemplates, it is stated, establishing a sash, door and blind factory.

Dunnellon-Phosphate Land, etc.—New York city and Philadelphia (Pa.) capitalists have purchased, it is reported, through J. E. Underwood, of Missouri, 1,500 acres of phosphate land for \$75,000, and will develop.

Dunnellon-Phosphate Mill.—The Marion Phosphate Co., previously mentioned, has awarded contract to George MacKay to erect a phosphate mill 45x100 feet and 50 feet high, at its mines near Dunnellon.

Eustis—Water Works.—Wright & Hazard are reported as organizing a company to construct a system of water works.

Fort Ogden-Phosphate Mines.—It is stated that the company lately reported as to develop phosphate mines has purchased the property of H. A. Ware on Peace river.

Kissimmee-Sugar Mill.—The St. Cloud Sugar Mill Co. is reported as increasing its capital stock from \$250,000 to \$1,000,000.

Milton-Cotton and Woolen Factory.—H. K. Coleson, L. F. West, E. V. McCaskill and others are organizing a stock company to establish the cotton and woolen factory lately mentioned.

Ocala-Foundry and Machine Shop.—The Orange Lake Manufacturing Co., previously reported as incorporated by F. A. Gardner, D. H. Irvine, G. W. Wilson and others to erect a foundry and machine shop at Orange Lake, have, it is stated, decided to locate in Ocala, and will employ 50 or 60 operatives.

Orlando-Rice Mill.—G. E. Macy will probably establish a rice mill.

Palatka-Shingle Factory.—John Walters will establish a factory, as reported in last issue, for the manufacture of his patent metal shingle and other metal goods.*

Starke-Sugar Refinery, Fertilizer Factory, &c.—J. L. Gaskins is president; J. S. Bailey, vice-president, and C. L. Peerk, secretary, of the Bradford County Muck Land Drainage Co., previously reported as building the new town of Samson City. The company will, it is stated, erect fertilizer factories, saw mill, sugar refinery, &c. The capital stock is \$200,000.

Tompkinsville-Phosphate Land.—Mr. Chisolm, of South Carolina, has purchased, it is reported, 500 acres of phosphate land, near Tompkinsville, for \$40,000.

Wakulla-Phosphate, &c.—The Wakulla Lumber & Phosphate Co. has been incorporated by A. L. Biedler, of New York, W. E. Hathaway, of Baltimore, and J. D. Ferrell with a capital stock of \$10,000.

Waldo-Saw Mill.—G. H. Barker is rebuilding his saw mill as stated in last issue.*

GEORGIA.

Albany-Water Works.—The water works mentioned in last issue will include a 100-foot tower, artesian well, pumping plant, etc., as stated. Nelson Tift can give particulars.*

Americus-Water Works.—The city will hold an election on July 10th to decide upon the issuance of \$25,000 of bonds to extend the water works. The mayor can give information.

Atlanta-Furniture Factory.—The Southern Furniture Co., operating a furniture factory, has been incorporated by Louis Newell, Otto Schwab and Oscar Pappenheimer; capital stock is \$45,000.

Atlanta-Check Punch Manufactory.—G. E. Hoppie has, it is stated, organized the Hoppie Bank Punch Co. with a capital stock of \$25,000 to manufacture his patent check punch.

Atlanta-Machine Shops.—The Brosius Motor Sewing Machine Co. will at an early date enlarge its factory to at least double present size and add new machinery, increasing capacity to 100 machines per day.

Augusta-Cotton Mill.—The Langley Manufacturing Co. has awarded contract for the extension of its cotton mill to MacKenzie & Stallings at \$11,000.

Augusta-Soap Factory.—John Crawford and R. B. Russell have purchased four acres of land near Athens and will, it is reported, erect a soap factory.

Augusta-Bleachery.—It is stated that a stock company is to be organized to erect the bleachery previously mentioned at a cost of \$100,000. The secretary of the Board of Trade can give information.

Bolton-Broom Factory.—J. W. English, J. L. Brown, G. W. Parrott and others have incorporated the Piedmont Broom Co. to manufacture brooms near Bolton. The capital stock is \$10,000.

Brunswick-Sewerage System.—The city has decided to issue \$300,000 of bonds for the sewerage system previously reported. Work will probably commence at once.

Cartersville Land.—Virginia capitalists will, it is stated, purchase and improve land in the vicinity of Cartersville.

Cartersville-Electric-light Plant.—It is stated that Rome parties will probably organize a stock company to erect an electric-light plant in Cartersville.

Cartersville-Manganese Mines.—The Cartersville Land & Manganese Co. has been organized by R. A. Alexander and W. E. Brown with the privilege of developing mineral lands, building furnaces, etc. It owns 1,860 acres of land and will develop. The capital stock is \$200,000.

Cartersville-Chair Factory.—A \$5,000 stock company will probably be organized to establish a factory for the manufacture of the S. P. Gage patent folding chair.

Columbus-Flour Mill.—W. L. Tillman is president, and Thomas Salisbury, secretary, of the City Mills Co., recently reported as incorporated to erect a 500-barrel flour mill.

Columbus-Artesian Well.—The city has accepted the proposition of the Columbus Water Co. to sink the artesian well lately mentioned.

Columbus-Foundry and Machine Works.—Work is to be commenced shortly on the new building for Golden's Foundry & Machine Works, previously reported as to be enlarged. It is to be two stories, 60x210 feet, and cost \$25,000.

Columbus-Gin Factory.—F. H. Lummus contemplates establishing a cotton gin factory.

Cordele-Acid Phosphate Works.—The Cordele Guano Co. contemplates adding machinery for the manufacture of acid phosphate from phosphate rock.*

Crawfish Springs-New Town, &c.—General J. T. Wilder, of Johnson City, Tenn., and others are the purchasers of the land lately mentioned. The property includes, it is stated, 12,000 acres of iron and coal lands and 4,800 acres for town-site. It is intended to develop the minerals, build coke ovens, iron furnaces, etc., the capital stock to be \$5,000,000.

Dawson-Land.—The Dawson Investment Co. has, it is stated, purchased 145 acres of land for \$6,000 and will lay it off into town lots.

Eatonton-Canning Factory.—The Putnam County Canning & Pickling Co. has been organized with Dr. J. D. Weaver, president, and B. W. Hunt, treasurer, to erect the canning factory lately mentioned.*

Ellijay-Tannery.—It is stated that a tannery will be erected.

Gainesville-Electric-light and Water Works.—The city has decided by a popular vote to issue \$40,000 of bonds for the electric-light and water works lately mentioned. George K. Looper, mayor, can give information.

Gainesville-Furniture Factory.—B. F. Stidham & Bro., of Flowery Branch, will, it is reported, move their furniture factory to Gainesville.

Gainesville-Novelty Works.—F. M. Loden has, it is reported, purchased the novelty works of Jett & Roberts and will operate.

Griffin-Brush Factory.—M. B. Fulghum contemplates erecting a brush factory.*

Griffin-Broom Factory.—Lyon & Bishop purchased the Griffin broom factory, as lately stated.

Harmony Grove-Fertilizer Factory and Oil Mill.—The Jackson County Farmers' Alliance, A. C. Appleby, secretary, mentioned in last issue, contemplates the erection this fall of a cotton-seed oil mill and fertilizer factory within a radius of 10 miles of Harmony Grove.

Kensington Land, Coal & Iron Co.—The Kensington Land, Coal & Iron Co., previously mentioned (under Chattanooga, Tenn.), is reported as constructing water works. The company can be addressed at Chattanooga, Tenn.

La Grange-Candy Factory.—The establishment of a candy factory is projected. H. L. Herring can give information.*

La Grange-Cotton Compress.—The cotton compress previously mentioned will be built. P. G. Autrey can give particulars.

Machen-Brick and Tile Works.—Work has been commenced on the erection of the brick and tile works previously reported. E. C. Machen can give particulars.

Macon-Water Works.—George Duncan has, it is stated, optioned the McCall pond property at \$30,000, and will, with others, organize a stock company to construct a new system of water works.

Madison-Granite Quarries.—J. R. Hightower is developing granite quarries near Madison.

Madison-Variety Works.—The Madison Variety Works will put in a planer and matcher and probably veneer machines.*

Madison-Brick-yard.—M. L. Richter and others have organized the Madison Brick Co. to establish a brick-yard.

McBean Depot.—Oil Mill.—The Farmers' Alliance of Richmond and Burke counties contemplates erecting a cotton-seed oil mill.

Milledgeville-Fertilizer Factory & Oil Mill.—The Milledgeville Oil & Fertilizer Co. will, it is stated, double the capacity of its mill.

Milledgeville-Electric-light Plant.—The Milledgeville Electric Light Co. will, it is reported, put in a new dynamo with 700 to 1,200 light capacity; also a boiler and engine.

Rome-Mining.—S. E. Clarke and W. E. Goodwin, of Hartford county, Conn., and L. B. Carey, of Floyd county, Ga., have incorporated the Southern Iron Ore Co. to develop mineral lands, etc. The capital stock is \$150,000.

Savannah-Brewery.—G. B. Clarke, of Mobile, Ala.; L. P. Hart and S. J. Whiteside and others have incorporated the Central Brewing Co. to erect a brewery. The capital stock is \$100,000.

Savannah-Land.—J. S. Collins, W. K. Wilkinson, J. R. Anderson and others have incorporated the Savannah Real Estate, Loan & Building Co. to deal in real estate. The capital stock is \$125,000.

Savannah-Land.—The Southern Land & Improvement Co. has been incorporated by William Rogers, H. R. Jackson, F. S. Lathrop and others with a capital stock of \$25,000.

Savannah-Land.—J. H. Furber, U. H. McLaws and others have incorporated the Union Land Co. to deal in land, etc. The capital stock is \$10,000.

Savannah-Ice Factory.—John Schwarz is president; George Meyer, vice-president, and J. E. Grady, secretary, of the Savannah Cold Storage & Ice Manufacturing Co., previously mentioned.

Savannah-Glass Works.—A stock company will probably be organized to erect glass works. The mayor can give information when anything is done.

Tallahassee-Chemical Works.—The establishment of chemical works is projected. J. W. Dorsey can give information.

Whigham-Ginnyery.—A ginnyery with a capacity for 60 bales per day will be erected, and contract has been awarded to the Van Winkle Gin & Machinery Co., of Atlanta.

Whigham-Oil Mill and Fertilizer Factory.—Contract for building the cotton seed oil mill and fertilizer factory of the Whigham Manufacturing Co., lately mentioned, has been awarded to the Van Winkle Gin & Machinery Co., of Atlanta.

White Sulphur Springs-Bottling Works, &c.—The Georgia Development Co. has, it is stated, purchased the White Sulphur Springs property, will improve same and erect bottling works.

KENTUCKY.

Frankfort-Turnpike.—A bill has been introduced in the legislature to incorporate the Lulay-grub Turnpike Road Co.

Frankfort.—Bills have been introduced in the legislature to incorporate the Eclipse Electric Light, Heating & Motor Power Co. and the Mulbury Hill Improvement Co.

Georgetown-Water Works.—The Georgetown Water Co. has issued \$35,000 of bonds.

Glasgow-Oil Well.—Mills & Haven, of Findlay, Ohio, are sinking an oil well.

Henderson-Canning Factory, &c.—A stock company is being organized by A. B. Sights, R. E. Eastin and others to establish a canning, butter and cheese factory. The capital stock is to be \$8,000.

Lexington-A bill to incorporate the Kentucky Water, Heating & Illuminating Co. has been introduced in the legislature.

Louisville-Paper Mill.—The Du Pont Paper Mill Co. expects to repair the loss occasioned by the fire mentioned in last issue.

Louisville-Electric-light Plant.—The Louisville Gas Co. will erect an electric-light plant.

Louisville-Filtering Plant.—The Louisville Water Co. will probably put in a filtering plant.

Louisville-Granite.—J. W. McComas has received contract to supply the city with the 38,000 tons of granite previously mentioned.

Madison-Water Works.—The Madison Water Works Co. will, it is stated, build a water tank 106 feet high.

Middlesborough—Brick Works.—The Belt Line Brick Co. has been organized with J. M. Brooks, president; W. E. Scarritt, vice-president, and T. S. Buchanan, secretary, to establish brick works.

Middlesborough—Fire-brick Works.—The Garnkirk Fire Brick Co. has been incorporated by A. A. Arthur, E. E. Malcolm, S. F. Jackson and others to manufacture fire-brick tiling and other articles of fire-clay, the capital stock to be \$50,000.

Ricedale—(P. O. at Drakesboro)—Coal Mine. It is stated that a company is opening a coal mine at Ricedale.

Richmond—Gas and Water Works.—A. E. Boardman, of Macon, Ga., is president; E. H. Gorke, of Portland, Me., treasurer, and Charles S. Powell, secretary, of the Richmond Water & Light Co., which will build the gas and water works lately referred to. It has purchased a site for the works and will erect a water tower 166½ feet in height; contract for masonry for same has been awarded at \$5,750. The capital stock is \$200,000.

Salt Lick—New Town, &c.—J. N. Phipps, of Mt. Sterling, has purchased 1,000 acres of land between Salt Lick and Farmers, and intends organizing a company to build a new town to be called Midland City; also secure the building of an 80 ton iron furnace, tannery, wagon and other factories.

Somerset—Turnpike.—A bill to incorporate the Somerset, Mt. Vernon and Lancaster Turnpike Road Co. has been introduced in the legislature.

Three Forks City—Water Works, &c.—The St. Helens Improvement Co. and the Kentucky Union Land Co., who are building Three Forks City, intend constructing water works, erecting an electric-light brick works, and woodworking factories. The address of the former company is 307 and 309 W. Main street, Louisville.

Winchester—Ice Factory.—It is stated that the Winchester Brick Co. contemplates erecting an ice factory.

Winchester—Water Works.—Wheeler & Parks, of 89 State street, Boston, Mass., have secured contract for building the water works lately mentioned.

LOUISIANA.

Hammond—Gin.—E. M. Gallup will erect a cotton gin.*

Lake Charles—Woodworking Factory.—F. D. Meade will erect a factory for working hardwood lumber.*

Mer Rouge—Cotton Compress, etc.—C. C. Dav enport, C. Newton, Wimerley Bros. and others have incorporated the Mer Rouge Ginnery Co. to operate cotton compress and ginnery, manufacture cotton-seed oil, etc. Contract for ginnery has been awarded to the Van Winkle Gin & Machinery Co., of Atlanta, Ga. The capital stock is \$10,000.

Monroe—Fertilizer Factory.—A contract has been awarded to the Van Winkle Gin & Machinery Co., of Atlanta, for the erection of a fertilizer factory.

Monroe—Oil Mill.—The Planters' Oil Mill previously mentioned has let contract for the erection of its cotton-seed oil mill to J. W. Wright at \$11,800.

New Orleans—Brewery.—A \$200,000 stock company is reported as being organized to erect a new brewery.

New Orleans—Hardware Factory.—Holloway & Gardes (Limited) have been incorporated to manufacture hardware. The capital stock is \$200,000.

New Orleans—Saw Mills, etc.—An English syndicate is reported as negotiating to purchase all the profitable saw mills and available timber lands adjacent to, in New Orleans and along the lake coast. Philip A. Orr can give information.

Provençal—Saw and Shingle Mill.—W. D. Simpkins has, it is stated enlarged the Roubieu saw mill and added a shingle mill.

MARYLAND.

Baltimore—Paving.—An appropriation of \$12,000 has been made by the city council to pave with Trinidad asphalt the streets around Hanover market.

Baltimore—Sewer.—The city council has appropriated \$48,000 to construct a sewer on Smallwood, Franklin and Pulaski streets.

Baltimore—Electric-light Plant.—The Maryland Electric Co., referred to in last issue as contemplating the erection of an electric-light plant, has bought out the Southern Electric Co.

Baltimore—Grain Elevators.—The estimated cost of the two grain elevators mentioned in last issue as to be built by J. T. Moulton & Son, of Chicago, Ill., for the Northern Central Railway Co., is \$500,000. Work is to commence at once.

Glenburnie—Knitting Mill.—The Curtis Creek Mining & Manufacturing Co. is reported as to establish a knitting mill.

Greenstone—Marble Lands.—Timothy Steward of Macon, has, it is stated, purchased marble lands of the Greenstone Serpentine Marble Co. and will develop.

Havre de Grace—Flint Works.—Whiteford Bros. will, it is reported, put new machinery in their flint works.

McKinstry's Mills—Stone Quarry.—It is reported that Dorsey Bros. are quarrying stone.

Oakland—Street Improvements.—The town council has decided, it is stated, to issue \$10,000 of bonds for street improvements.

Salisbury—Planing Mill.—W. H. Jackson & Son have erected a planing mill.

Washington, D. C.—Abattoir.—Weaver, Kengla & Co. will erect brick abattoir to cost \$14,000.

Westminster—Bottling Works and Brewery.—Eugene May, of England, has purchased the bottling works of C. E. Jerome & Bros., and contemplates establishing a brewery.

MISSISSIPPI.

Columbus—Cotton Mills.—The Tombigbee Cotton Mills will, it is stated, put in new machinery.

French Camp—Gin, Grist and Saw Mills.—W. H. Power has purchased a grist mill and cotton gin and expects to add a pony saw mill at an early date.

Jackson—Fertilizer Factory.—The \$30,000 stock company previously reported as organized with Dr. P. W. Peoples, president, to erect a fertilizer factory has awarded contract for same to the Van Winkle Gin & Machinery Co., of Atlanta, Ga.

Meridian—Woodworking Factory.—The Meridian Lumber Manufacturing Co. has been organized by W. P. Haynes and others.

Pascagoula—Land.—H. J. Russell has, it is stated, purchased for Chicago parties 16,000 acres of land from the A. E. Lewis estate, and will form a stock company to improve same.

Yazoo City—Electric-light and Water Works.—L. M. Fishback, representing the Thomson-Houston Electric Co., of Boston, Mass., will, it is stated, submit a proposition to the town council for the erection of an electric-light plant and the construction of water works at an estimated total cost of \$40,000 to \$50,000.

NORTH CAROLINA.

Asheville—Gas Works.—Local and Chicago (Ill.) capitalists have organized, it is reported, the North Carolina Fuel Co. to erect a plant for the manufacture of fuel gas. The capital stock is \$500,000.

Asheville—Bridges.—The Board of Magistrates has decided, it is stated, to construct two bridges across the French Broad river, and one over Catawba creek.

Cherokee County—Timber Land.—A. H. Isbell, of Asheville, has, it is reported, purchased the W. H. Hammond property containing 10,000 acres of timber land for \$20,000.

Dunn—Distillery.—J. A. Morgan has erected, it is reported, a turpentine distillery.

Durham—Coal Mine.—J. S. Carr, A. B. Andrews, R. D. Patterson and others are reported as to form a stock company to develop coal in Orange county, five miles from Durham.

Franklin—Flour Mill.—W. J. Jenkins is erecting a flour mill.

Granite Falls—Sash, Door and Blind Factory.—The Russell Manufacturing Co. erected a sash, door and blind factory, as reported in last issue.

Greensboro—Soapstone Quarry.—W. R. Burgess and others contemplate developing a soapstone quarry.*

Greensboro.—The Union Land Co., reported in last issue as incorporated, has a capital stock of \$250,000.

Milton—Gold Mine.—The lease of the Connally gold mine has been secured, it is reported, by parties who will probably develop.

Moffitt's Mills—Sash and Blind Factory.—N. Cox, Son & Co. have added machinery to their sash and blind factory, as lately stated, and will put in a 24-inch resawing machine.*

Monbo—Cotton Mill.—P. B. Key has been elected president of the Long Island Cotton Mills, lately reported as incorporated and to put in new machinery.

Monroe—Cotton Mill.—The company of which A. F. Stevens is president, lately mentioned as to build a cotton mill, is reported as awarding contract for the erection of a building 81x280 feet for same to J. E. McAllister, of Gastonia.

Morganton—Electric-light Plant.—The contract for the electric-light plant lately mentioned has been let to the Westinghouse Electric Light Co., of Pittsburgh, Pa. It is to have capacity for 25 arc and 750 incandescent lights.

Morganton—Granite Quarry.—J. H. Pearson, previously mentioned as opening a granite quarry, will develop same.*

Oxford—Prizery.—Contract for building the prize tobacco factory for Adams Scott, mentioned in last issue, was awarded to Hundley Bros. & Co.

Oxford—Knitting Mill.—The Oxford Land Improvement & Manufacturing Co. is endeavoring to secure the removal of a knitting mill to Oxford.

Raleigh—Tobacco Factory.—The Farmers' Alliance and Knights of Labor will erect the tobacco factory referred to in last issue.

Raleigh—Pulp Mill, etc.—Brewer & Holding, referred to in last issue, have added a full set of wood pulp machinery and may start a spoke and handle factory at a later date.*

Rutherfordton—Gold Mines.—A Northern company has, it is stated, purchased the idler gold mines near Rutherfordton.

Rutherfordton—Canning Factory.—The Rutherfordton Canning Factory will probably increase the capacity of its factory.

Salisbury—Granite Quarry.—The Dunn's Mountain Granite Co. has been organized to develop granite quarries.

Salisbury—Gas Works.—The Salisbury Gas Light Co. is adding several new retorts.

Siler City—Cotton Factory.—A company has been organized to erect the cotton factory mentioned in last issue. J. A. Hadley, of Boston, is interested.*

Southern Pines.—Chewing-gum Factory.—A chewing-gum factory, it is reported, will be established.

SOUTH CAROLINA.

Aiken—Bagging Factory.—The Aiken Pine Cloth & Fibre Manufactory is reported as to put in new machinery and double its capacity.

Aiken—Knitting Mill.—The main office of the Dowdy Manufacturing Co., recently mentioned (under Augusta, Ga.), is in Aiken. It will erect its knitting mill 3½ miles from Augusta as stated.

Anderson—Bottling Works.—R. C. Strangmann, of the Robert Portner Brewing Co., will put in machinery, it is stated, to bottle soda water, sarsaparilla and ginger ale.

Barnwell—Fertilizer Factory.—The Van Winkle Gin & Machinery Co., of Atlanta, Ga., has received contract for furnishing plant for the fertilizer factory of the Barnwell Oil & Fertilizer Co. lately mentioned.

Camden—Fertilizer Factory and Oil Mill.—The Wateree Cotton seed Oil Mill mentioned in last issue will erect a cotton-seed oil mill and fertilizer factory.*

Charleston—Oil Mill.—Northern capitalists are reported as in correspondence with J. H. Devereux relative to the establishment of a cotton-seed oil mill near Charleston.

Charleston—Factory.—The Automatic Time Stock Feeder Co., previously mentioned, has increased capital stock to \$6,000.

Charleston—Oil Mill.—A Philadelphia syndicate, including James S. Cochran, C. F. Zimmerle and others, contemplates the erection of a cotton-seed oil mill, using in the manufacture a new process of cleaning the lint from the seed.

Columbia—Iron Works.—Wilmer Brown, of Lockport, N. Y., is reported as in correspondence, through D. Cardwell, with the Department of Agriculture inquiring as to what inducements will be offered for the location of works to manufacture fine iron from scrap and to employ 150 operators.

Florence—Land.—G. G. Lynch and J. P. Coffin have purchased through John Kuker a tract of 50 acres of land near the National Cemetery and will develop.

Gaffney City—Oil Mill.—R. A. Jones is reported as endeavoring to organize a stock company to establish a cotton-seed oil mill.

Glendale—Cotton Mill.—D. E. Converse & Co., proprietors of the Glendale Mills, referred to in last issue, will build a three-story addition, 160x140 feet, increasing capacity to 15,000 spindles and 500 looms.

Greenville—Electric-light Plant.—A company of foreign capitalists will, it is reported, erect an electric-light plant.

Kershaw—Brick-yard.—O. Floyd and S. L. Gardner contemplate establishing a brick yard.

Orangeburg—Laundry.—The stock company lately mentioned as to erect a steam laundry has been incorporated as the Orangeburg Steam Laundry Co. by B. H. Moss, J. W. Fairley W. L. Izlar and others.*

Rock Hill—Soap Factory.—J. T. Roddey will probably organize a stock company to erect a soap factory.

Spartanburg—Electric-light Plant.—The Spartan Mills has put in the electric-light plant referred to in last issue.

Spartanburg—Iron Foundry, etc.—The Morgan Manufacturing Co. will increase its capital stock to \$15,000 and, it is reported, establish an iron foundry and brick-yard.

St. Matthews—Oil Mill.—Machinery has been ordered for the St. Matthews Oil Mill referred to in last issue.

TENNESSEE.

Alexandria—Planing Mill.—J. F. Roy, M. F. Schurer, J. L. Boone and others will organize the De Kalb Manufacturing Co. to manufacture sash, blinds, building material, etc.*

Bartlett—Ginnery.—The Bartlett Mill & Manufacturing Co. contemplates putting in two 80-saw cotton gins, cotton-seed elevators and cotton elevator, none of which have been purchased.

Bristol—Coal Mines.—The Crab Orchard Coal & Iron Co. has been organized with William McGeorge, Jr., of Philadelphia, Pa., president; Dr. M. M. Butler, vice president, and W. W. James, secretary, to develop coal mines. The capital stock is \$200,000.

Bristol.—The Bristol Industrial Land Co., controlling 5,000 acres of land, will shortly be organized.

Chattanooga—Laundry.—The Model Steam Laundry is reported as to put in new machinery.

Chattanooga—Foundry.—The Ross-Meehan Brake Shoe Foundry Co., previously reported as enlarging its foundry, will put in a force blower and a new 75 inch steel cupola.

Chattanooga—Iron Furnaces.—Negotiations are said to be pending for the purchase by Fort Payne (Ala.) and English parties of the Walker Coal & Iron Co.'s iron furnace at Rising Fawn, Ga.; the Chattanooga Iron Co.'s furnace in Chattanooga, the Dade coal mine and other property of the Georgia Mining, Manufacturing & Investment Co.

Chattanooga—Boiler Works.—Shea & Strable will, it is reported, erect new boiler works.

Chattanooga—Foundry and Machine Shop.—Thomas Evans has, it is reported, purchased the old water works plant, and will convert same into a foundry and machine shop.

Chattanooga—Wagon Factory.—W. F. McDowell & Co. purchased the plant of the Chattanooga Wagon Manufacturing Co., as stated in last issue, and will enlarge same.

Clarksville—Iron Furnace.—It is stated that W. H. Woodward and others, of Birmingham, Ala., have organized a stock company and will at once commence work on the 100 ton iron furnace previously mentioned.

Dayton—Saw Mill.—Mr. Shafer, of Ada, Ohio, contemplates erecting a saw mill.

East Chattanooga—Planing Mill, etc.—The Southern Lumber & Manufacturing Co., of Chattanooga, mentioned in last issue as to erect planing mill and dry-kilns, has increased capital stock to \$75,000, and will also build a sash, door and blind factory.*

Goodlettsville—Flour and Grist Mill.—There is talk of a stock company being organized to erect a flour and grist mill.

Greene County—New Town, etc.—George H. King, of Kansas City, Mo., W. P. McClatchy, and B. M. Tarver, of Chattanooga; L. C. Ivey, New Orleans, La., and others purchased 70,000 acres of mineral, timber and farming lands in East Tennessee and Western North Carolina as stated in last issue, for \$350,000. They intend organizing a \$350,000 stock company to develop as reported, and will probably erect several saw, stove and shingle mills.*

Kimball (P. O. at Wallview)—Water Works and Electric-light Plant.—The Kimball Town Co. contemplates erecting an electric light plant and constructing water works.

Knoxville—Brick-yard.—Furry & Co. are reported as putting new machinery in their brick-yard.

Knoxville—Paper Mill.—It is rumored that another paper mill will be erected.

Knoxville—Coal Mines.—B. A. Jenkins, B. R. Hutchcraft, A. W. Shenck and others have incorporated the Buffalo Mountain Coal, Coke & Railroad Co. to operate in Knoxville coal district.

Knoxville—Ice Factory.—The Knoxville Ice Co. has, it is reported, increased the capacity of its factory.

Memphis—Plating Works.—G. W. Ascoug, of Quincy, Ill., contemplates moving his plating works to Memphis.

Memphis—Land, etc.—The Memphis Manufacturing & Building Co. is to be organized to purchase and improve land, induce the location of new industries, etc.

Nashville—Land.—It is stated that a stock company has purchased through Christopher & Kirkman a tract of land adjacent to Belmont Park for \$72,000, and will improve same, lay off streets, &c.

Rockwood—Woodworking Factory.—F. W. Watkins and E. Longueure, of Boston, Mass., are reported as erecting a woodworking factory.

Union City—Spoke Factory.—B. H. Bransford will erect a new spoke factory.*

TEXAS.

Alvarado—Artesian Well.—An artesian well will probably be sunk.

Austin—Cement Works.—A proposition to establish cement works has been submitted to the Board of Trade.

Baird—Gin and Grist Mill.—J. B. Hensley will erect a cotton gin and grist mill as reported in last issue.*

Beaumont—Manufacturing.—The Beaumont Improvement Co. has been chartered by S. P. Ogden, L. B. Levy, U. Weiss and W. A. Fletcher with authority to manufacture wood and charcoal. The capital stock is \$50,000.

Beeville—Ginnery and Mill.—W. W. Pearce will erect the cotton ginnery previously reported, and will add a corn mill in the fall.*

Brenham—Cotton Compress.—The Brenham Compress Co. will probably purchase the cotton compress of the Standard Cotton Oil & Compress Co., mentioned in last issue and improve same.

Cleburne—Oil Mill.—A stock company will probably be organized to build a cotton seed oil mill. The secretary of the Board of Trade can give information.

Cleburne—Ice Factory.—S. E. Moss and C. Williams have, it is stated, contracted for machinery for the ice factory mentioned lately.

Corsicana—Artesian Well.—J. F. Stout, mayor, will receive bids until June 20 for the sinking of an artesian well.

Corsicana—Oil Mill.—The company previously mentioned as to be organized by H. G. Damon and others to erect a cotton-seed oil mill is to have a capital stock of \$75,000, and to commence work as soon as \$15,000 have been subscribed.

Dallas—Artesian Well.—The Dallas Brewing Co. will sink the artesian well lately mentioned.

Dallas—Artificial Stone and Tile Works.—It is stated that Dallas and Kansas (Mo.) parties have organized the Oak Cliff Stone & Tile Co. to erect artificial stone and tile works at Oak Cliff.

Dallas—Typewriter Factory.—J. W. Pierce, of Belton, is reported as endeavoring to organize a stock company for the manufacture of his patent typewriter.

Dallas—Water Works.—The Oak Cliff Water Supply Co. is, it is reported, extending its mains, building a new reservoir and increasing the height of the tower at Oak Cliff 70 feet.

Dallas.—It is stated that a stock company is being organized for the purpose of making navigable the Trinity river, from Dallas to the Gulf.

Denison—Land.—W. B. Munson has, it is stated, purchased the Steve Wilson property of 300 acres for \$30,000.

Dublin—Water Works.—The city council has been petitioned for a franchise to build water works to be completed within six months. The mayor can give information.

Galveston—Refrigerator.—It is stated that I. Dahlman has secured the contract to supply 600 tons of dressed beef every fortnight to the Metropolitan Trading Association, of London, Eng., and will build a large refrigerator.

Galveston.—The Dickinson Land & Investment Co., lately mentioned (under Dickinson) is being organized by Blodge, Bertrand & Co., and is to have a capital stock of \$100,000.

Gatesville—Water Works.—It is stated that a stock company is being organized to sink an artesian well and construct water works.

Grundyville—Cotton Gin.—The Grundyville Ginning Co. has been incorporated with a capital stock of \$5,000.

Harrold—Artesian Well.—It is stated that contract has been let for an artesian well.

Hillister—Lumber Mills.—The Tyler County Lumber Co. has been incorporated to operate the lumber mills of Arthur Hutchins. The capital stock is \$50,000.

Houston—Brick-yard.—L. Morley & Sons have established the brick-yard lately referred to.

Houston—Paper Mill.—Emile Bohn, of Brenham, will, it is stated, erect in Houston a mill for the manufacture of paper from cotton seed hulls.

Houston—Bridge.—A bridge to connect the Second and Fifth wards will probably be constructed. The mayor can give information.

Houston—Canning Factory.—J. W. Haskins is president; H. B. Rice, vice-president, and S. D. Moore, secretary, of the Houston Canning Co., mentioned in last issue as to erect a canning factory.

Hutto.—The Town Improvement Co. has been incorporated with a capital stock of \$10,000.

Laredo—Cotton Mill.—Plans and specifications for the cotton mill lately mentioned as to be erected by parties represented by A. H. McVickers, have been prepared. The main building is to be 400x170 feet. The estimated cost is \$500,000, and work will, it is stated, commence at once.

New Birmingham—Iron Furnace.—The New Orleans & Cherokee Iron Manufacturing Co. is the name of the company mentioned in last issue as to build a 50-ton iron furnace.

New Birmingham—Publishing.—The Record Publishing Co. has been reorganized with J. D. Baker, president; Wade Bonner, vice-president, and G. W. MacDonnell, secretary, to publish the Southwestern Iron & Lumber Record. The capital stock is \$25,000.

Orange—Machine Shops.—The proposition of the Gulf & Northwestern Railroad Co., mentioned elsewhere in this issue, includes the erection of machine shops.

San Antonio—Fire Alarm System, etc.—The election to consider the issuance of \$250,000 of bonds, lately mentioned, resulted in favor of the issue. The disposition of the proceeds includes \$100,000 for the iron bridges over the San Antonio river, recently referred to, and \$25,000 for an electric fire-alarm system.

San Antonio—Ice Factory, Refrigerator, &c.—The San Antonio Stock Yards & Abattoir Co., lately mentioned, is reported to erect an ice factory and a refrigerating plant.

Schulenberg—Oil Mill.—The cotton-seed oil mill, lately reported as chartered, is the mill

formerly operated by C. Baumgarten, and will be known as C. Baumgarten & Sons.

Sherman—Planing Mill.—The East Sherman Planing Mill Co. has been organized with a capital stock of \$15,000 to erect a planing mill in East Sherman.

Sherman—Sash, Door and Blind Factory.—A sash, door and blind factory is reported as to be erected.

Sherman—Electric Light.—The city has enlarged its arc electric-light plant. J. S. Porter, mayor, can give particulars.

Stephenville—Canning Factory.—A \$30,000 stock company has been organized by M. S. Crow, C. J. Shapard, L. N. Frank and others to erect the canning factory lately mentioned. It is to employ from 10 to 150 hands.

Taylor—Gin and Oil Mill.—The Taylor Cotton Seed Oil Mill & Gin Co., lately reported, has a capital stock of \$60,000.

Texarkana—Woolen Mill.—George Fouke, of the Gate City Lumber Co., has, it is stated, purchased the Texarkana woolen mill.

Tyler—Gas Works.—It is stated that gas works will be built.

Tyler—Sewerage System.—The city has, it is stated, awarded contract for the construction of 10 miles of sewers. The mayor can give particulars.

Vernon—Bridges.—The Milwaukee Bridge & Iron Works has received contract at \$43,000 to rebuild the Pease river bridge, lately mentioned; also four bridges on Beaver creek.

Waco.—L. C. Alexander and others have incorporated the Waco Improvement Co. with a capital stock of \$50,000.

Waxahachie—Electric-light Plant.—The Waxahachie Electric Light Co. has awarded contract for its plant lately mentioned to the Heister Electric Light Co., of St. Louis, Mo.

Waxahachie—Cotton Compress.—The erection of a cotton compress is talked of. E. A. Du Bose can give information when anything is done.

Waxahachie—Water Works.—A franchise for building the water works lately mentioned has been granted by the city to the Waxahachie Water Works Co.

VIRGINIA.

Alexandria—Ice Factory.—A stock company will be organized, it is reported, to erect an ice factory, the capital stock to be \$15,000.

Alexandria.—The Northwest Improvement Co. has been incorporated with B. Wheat, president; J. J. Brodrie, vice president, and George Wise, secretary, to deal in real estate. The capital stock is \$100,000.

Alexandria.—The Government Official Improvement Co. has been incorporated with F. O. St. Claire, president; McK. Downham, vice-president, and D. S. Pickrell, of Washington, D. C., secretary, to deal in real estate. The capital stock is \$180,000.

Buchanan—Brick and Tile Works.—The Buchanan Brick & Tile Works, lately reported, has been incorporated with A. L. Gorley, president, and I. S. Simmons, secretary.

Buena Vista—Mineral Lands.—T. S. White is reported as selling 2,000 acres of mineral lands.

Crowder—Mineral Land.—Captain Jerome, of Norfolk, is reported as purchasing the Ballagh farm, including 1,100 acres of land, and which is said to contain manganese and iron ores, for \$25,000. He has also, it is stated, secured options on adjoining land.

Crowder—Saw Mill.—Decker & Co. have erected another saw mill.

Danville—Land, etc.—The West End Land Co. has been incorporated with M. P. Jordan, president; T. A. Cary, Richmond, vice president, with the privilege of dealing in real estate, establish gas and water works, secure the location of industrial enterprises, etc., the minimum capital stock to be \$50,000; maximum \$300,000.

Front Royal—Brick-yard.—John Hushour and others will establish a brick-yard.

Front Royal—Iron Bridges.—The Front Royal & Riverton Improvement Co. will build one or more iron bridges. G. W. Cone, vice president, can give particulars.

Glasgow—Iron Furnaces.—The Glasgow Furnace Co. has selected a site for its two iron furnaces lately referred to, and is having plans and specifications prepared.

Greenville—Ore Washer.—Joseph Pelter has, it is reported, put up a new ore washer.

Harrisonburg—Pottery.—William Sherrett will remove, it is reported, his pottery from Trenton, N. J., to Harrisonburg.

Henrico County—Land, etc.—Philip G. Bartlett has purchased the properties of the Henrico Coal Co., 4,000 acres of land in Henrico and Hanover counties, with buildings, machinery, etc., for \$5,000.

Leesburg—Iron Land.—The Potomac Mining & Reduction Co. has, it is stated, purchased from W. F. Snyder, of Philadelphia, the old Furnace tract of iron land, 625 acres, for \$20,000.

Lexington—Bridges.—The Groton Bridge & Manufacturing Co. has received contract for the superstructure of the South river bridge and Goshen bridge, previously mentioned. E. A. Johnson and T. R. Wills have the contract for the stone work on the South river bridge and M. W. Johnson and George Cameron for the Goshen bridge.

Lexington—Flour Mill.—W. M. Zollman is remodeling his flour mill at Bolivar Mills to the roller system as lately stated, and has contracted for machinery to have a daily capacity of 40 barrels.

Lynchburg—Land.—The Rivermont Co. has purchased the farm of J. C. Featherstone for \$15,000.

Manchester—Axle Works.—Work has begun, it is reported, upon the plant of the Johnson Axle Co., recently mentioned as to locate in Manchester.

Manchester—Cotton Mill.—The Marshall Manufacturing Co. will hold a meeting June 24, 1890, to consider the disposal of its property in Manchester.

Narrows.—William Mahone, Col. May and others have, it is reported, organized a \$75,000 stock company to improve a natural cave lately discovered.

Norfolk County—Land.—The South Portsmouth Land Improvement Co. has purchased, it is reported, 110 acres of land from A. H. Lindsay for \$26,000.

Norfolk—Land, etc.—The Lambert's Point Improvement Co., lately reported as incorporated, has purchased about 100 acres of land at Lambert's Point with the intention of promoting the location of new industries.

Norfolk—Real Estate, etc.—The Eastern Branch Improvement Co. has been incorporated with W. A. Wrenn, president; J. G. Womble, vice-president; J. R. Todd, treasurer; W. L. Tait, secretary, to deal in and improve real estate, the capital stock to be not less than \$50,000 nor more than \$100,000.

Petersburg—Artesian Well.—J. B. Worth & Co., who will operate the People's Ice Works, and recently mentioned as to sink an artesian well, are preparing, it is stated, to sink another well.

Richmond—Motor Works.—R. W. Traylor, lately mentioned, will, it is stated, erect a plant for the manufacture of electric motors.

Roanoke—Flour Mill.—The Roanoke Grocery & Milling Co., reported in last issue as incorporated, operates a flour mill.

Roanoke—Real Estate.—The Independent Investment Co. has been organized with R. M. Kent, Jr., president; H. M. Dickinson, secretary and treasurer, to deal in real estate. The capital stock will be \$10,000.

Roanoke—Land, etc.—The National Investment Co. has been incorporated with G. W. Ramsey, president; H. W. Crowe, vice-president, and W. F. Winn, secretary, to deal in real estate. The capital stock is not to be less than \$20,000 nor more than \$100,000.

Shendun (P. O. Weyer's Cave)—Brick-yard.—Hezekiah Jordan, of Kentucky, will, it is reported, establish a brick-yard.

Shendun (P. O. Weyer's Cave)—Saw Mill.—It is stated that a saw mill will be erected.

Shendun (P. O. Weyer's Cave)—Tile Works, etc.—The Grottoes Co., recently mentioned as incorporated, has the following officers: Jed Hotchkiss, president; H. M. Bell, vice-president, and A. M. Howison, secretary, all of Staunton. Its property is being surveyed by J. I. Harmsberger, and the company will, it is stated, establish tile works; also build a bridge over the South river. The present capital stock is \$3,000,000.

South Boston—Land.—The East End Land Improvement Co. has been incorporated by R. H. Easley, W. H. Shepherd, E. L. Evans and others to purchase and improve 150 acres of land.

Vinton—Planing Mill.—Callahan & Bros., of Lynchburg, will, it is reported, establish a planing mill and sash, door and blind factory.

WEST VIRGINIA.

Calhoun County—Oil Lands.—John Prescott and J. C. Gibney, of Little Washington, Pa., have leased 31,000 acres of oil lands in Calhoun and Gilmer counties and will sink oil wells.

Goose Creek—Oil Lands.—It is stated that a stock company has leased four acres of oil land from John Moyery and will develop same.

Grafton—Oil Well.—It is reported that a stock company is being organized to sink an oil well.

Mannington—Oil Well.—Wilson & Badger expect to sink an oil well.

McDowell County—New Town.—A Scotch syndicate, including Sir Alexander Mac Bean, Sir John McDonald, Sir Charles Tupper, Lord Anan, Earl of Wigton, and others, have purchased 50,000 acres of coal, iron and timber lands and proposes building a new town. The Scotch Bureau of Information, 15 State street, New York city, can give particulars.

Point Pleasant—Electric-light Plant.—G. E. Milligan, of Parkersburg, purchased the plant of the Point Pleasant Electric Light & Power Co.,

as lately stated, and expects to sell same to a party who will add new boilers; but if the sale is not made, he will put in two boilers and probably another dynamo.

Spottsylvania County—Gold Mines, etc.—The officers of the Locust Hill Gold Mining Co., mentioned in last issue as incorporated at Alexandria, are: J. E. Emerson, president; F. F. Brierly, vice-president; B. W. Royal, secretary and treasurer. The company owns 150 acres of land in Spottsylvania county, and will develop gold and silver mines.

Tyler County—Oil Wells.—The Owl's Head Oil Co. has been organized at Washington, Pa., with W. H. McFarland, of Taylorstown, Pa., president, and T. E. Smith, of Tyler county, secretary, to develop oil lands in Tyler and Wetzel counties.

Volcano—Oil Wells.—Cuthbert & Carle will, it is stated, sink oil wells.

Volcano—Oil Well.—The Mt. Farm Oil Co. is reported as sinking an oil well at Holley Run.

Wheeling—Machine Shops, etc.—The Wheeling Bridge & Railway Terminal Co. will, it is reported, erect machine shops and roundhouse.

BURNED.

Baltimore, Md.—The cotton-seed oil works of A. F. Radart, at Lower Canton; reported loss \$10,000.

Berkeley Springs, W. Va.—The Fruit Hill Hotel.

Durham, N. C.—The factory of Monroe Long.

Elkton, Tenn.—The cotton gin of J. W. King.

Goff's P. O., Va.—The distillery of Robert Goff; loss reported as \$10,000.

Greenville, N. C.—The saw mill of Latham & Skinner; loss about \$2,000.

Lula, Ga.—The whiskey distillery of Joel Coffee.

Memphis, Tenn.—The grain elevator of the Kentucky Central Railroad Co. (office, Cincinnati, Ohio); reported loss \$75,000.

Mt. Olive, N. C.—The grist mill of Richard Parker.

Newton, Miss.—The saw mill, grist mill and cotton gin of Wyatt Bros.; loss \$2,000.

Orange, Texas.—The saw mill of D. R. Wingate; reported loss \$40,000.

Orange, Texas.—The shingle mill of R. B. Russell & Sons; reported loss \$20,000.

Suffolk.—H. W. Bradshaw's planing mill, dry-kiln, etc.; loss about \$40,000.

Withlacoochee.—The saw mill of Hammond & Peterson, and the cotton gin of F. Peterson; loss reported \$3,000.

Building Notes.

Americus, Ga.—P. H. Williams, chairman building committee, will receive proposals until June 20 for the erection of the city hall; also for additions and alterations of the public school buildings. Plans can be seen at Americus or at the office of G. L. Norrman, architect, Atlanta.

Asheville, N. C.—P. A. Demens will erect a residence as lately reported.

Athertonville, Ky.—Thomas Smith, of Louisville, is reported as to have contract for the erection of two warehouses.

Augusta, Ga.—The Commercial Club writes that it proposes to erect the club-house lately mentioned, but will not do so until next year.

Baltimore, Md.—W. F. Weber has prepared plans for remodeling Guy's Hotel into an office building, lately reported as purchased by M. C. Mengis. It is to be 60x173 feet, seven stories high, and to contain all modern improvements.

Barrow-on-Potomac, Va.—Hotel.—The Barrow Land Co. (office, Washington, D. C.), mentioned last week, will, it is reported, erect a hotel to cost \$60,000; also 50 dwellings to cost \$150,000.

Basic City, Va.—The Rockingham Investment Co. is chartered for the purpose of dealing in real estate and erecting buildings; capital stock \$25,000. W. D. Miller can give information.

Berlin, Md.—The Baltimore & Ohio Railroad Co. (office, Baltimore) will, it is reported, erect about 350 portable houses for employes.

Big Springs, Texas.—Contract for the erection of the building for the First National Bank of Big Springs is reported as having been let to El Paso parties; cost \$6,500.

Brunswick, Ga.—Hotel, etc.—Thomas Henley, G. M. Davis, C. A. Ellis and Frank Whitehead, all of Macon, are said to contemplate establishing a summer resort, erecting a hotel, etc., on Cumberland Island, about 20 miles south of Brunswick.

Buena Vista, Va.—The Methodist congregation has decided, it is stated, to erect a brick church to cost about \$6,000.

Buena Vista, Va.—A branch of the Mutual Building & Annuity Co. of Staunton has been organized with John W. Blackman, president, and B. E. Vaughan, secretary and treasurer.

Catonsville, Md.—The erection of a casino building is agitated. John Glenn can give information.

Charleston, S. C.—D. A. J. Sullivan is said to have received contract for the erection of a church for the Emanuel A. M. E. congregation, previously reported.

Chattanooga, Tenn.—Crocker & Smith have prepared plans for the erection of the building lately mentioned as to be erected by the University of the South.

Clarendon, Texas.—The Episcopalians are reported as to erect a church and rectory to cost \$10,000.

Columbus, Ga.—The Columbus Construction Co. has amended its charter, increasing capital stock to \$2,000,000, and also allow it to deal in and improve real estate.

Columbus, Ga.—The Columbus Investment Co. writes that it intends erecting the office building lately referred to, to be five or six stories high and 72x140 feet, and desires to correspond regarding the purchase of machinery, heating apparatus, etc., for same.*

Crawfish Springs, Ga.—Hotel.—General J. T. Wilder and others, mentioned elsewhere in this issue as to develop lands, etc., will, it is stated, erect a hotel.

Dallas, Texas.—E. G. Bower, judge, Dallas county, will receive proposals until June 15 for the erection of the Dallas county courthouse, previously mentioned, to be built of the following materials: First—Blue limestone for first story, with Honey Grove stone above and Burnet county red granite trimmings. Second—Blue limestone for first story, Gordon stone second story and Burnet county red granite trimmings. Third—Entirely of Burnet county red granite. Fourth—Entirely of Honey Grove stone. Fifth—Entirely of blue limestone. Sixth—Of any other Texas stone suitable and acceptable. Estimated cost of building between \$250,000 and \$300,000. Successful bidder will be obliged to give bond in \$100,000.

Florence, Ala.—Contract is reported to have been let to Zink & Breckenridge for the erection of the city hall building previously mentioned. Their bid was \$22,662.

Fort Worth, Tex.—Hotel.—The erection of a hotel is being talked of. M. B. Loyd, W. M. Harrison and others are interested.

Georgetown, Ky.—The Blue Grass Cordage Co. has advertised for bids for the erection of two brick warehouses.

Greensboro, N. C.—The Odell Hardware Co. is enlarging its warehouse.

La Grange, Ga.—A new jail and courthouse is contemplated. The county commissioners can give information.

La Grange, Ga.—The La Grange Female College and the Southern Female College buildings are being improved and enlarged.

La Grange, Ga.—The Atlanta & West Point Railroad Co. (office, Atlanta) and the Macon & Birmingham Railroad Co. (office, Macon) will erect the union passenger station as lately mentioned.

La Grange, Ga.—Hotel.—The La Grange Hotel is being extensively repaired.

Laredo, Texas.—The plans of Mr. Southern for the erection of the four schoolhouses lately mentioned have been accepted. Bids are now invited. Address E. A. Atlee, mayor.

Little Rock, Ark.—John G. Fletcher, president Confederate Home Association, writes that extensive buildings will be erected for the home shortly.

Louisville, Ky.—J. N. Struch and Jno. Greiner & Bros. are the lowest bidders respectively for building the engine-house and the hook-and-ladder house previously reported; bids \$7,200 and \$6,350.

Lumberton, N. C.—The Farmers' Alliance will erect the warehouse as reported last week.

Macon, Ga.—D. J. Bear will erect a three-story brick building to cost \$6,000.

Madison, Ga.—The Madison Variety Works will erect a warehouse as reported last week.*

Marion, N. C.—Hotel.—The Marion Street Railway & Hotel Co., mentioned elsewhere in this issue, has been organized, and will erect at once the hotel lately mentioned, to have a capacity for 250 guests.

Meridian, Miss.—Hotel.—The Southern Hotel Co. will receive proposals until June 15 for the erection of the hotel previously reported as to be built.

Middlesborough, Ky.—Work has been commenced on the building to be erected by the Coal & Iron Bank.

Morganton, N. C.—An Episcopal church will be erected.

Nashville, Tenn.—Work has been commenced on the erection of the Cumberland Presbyterian Publishing House, previously reported.

New Orleans, La.—The Young Men's Gymnastic Club has had plans prepared for the erection of a new building. E. J. Gueringer, president, can give information.

Richland, Ga.—Hotel, etc.—Work has been commenced on the hotel and bank building previously reported.

Richmond, Va.—Hotel.—Charles P. and Sylvanus Stokes are interested in the hotel previously mentioned.

Richmond, Va.—The Norfolk & Western Railroad Co. (office, Roanoke) will, it is reported, erect a depot.

Salisbury, N. C.—J. D. Small has contract for the erection of the national bank building previously reported.

San Antonio, Texas.—Site is said to have been purchased for the erection of the Roman Catholic college, to cost \$100,000.

Statesville, N. C.—James H. Windrim, supervising architect, Treasury Department, Washington, D. C., will receive proposals until June 21 for the erection (except approaches and heating apparatus) of the courthouse and postoffice building, St. Augustine, Fla.—The Pauly Jail Building & Manufacturing Co., St. Louis, Mo., is the lowest bidder for the erection of the jail previously reported as to be erected.

St. Teresa, Fla.—Hotel.—It is stated that Wm. P. Slusser, of Tallahassee, will erect a hotel.

Talladega, Ala.—George W. Chambers will, it is reported, erect 15 storehouses.

Tyler, Texas.—Durst & Bergfield, lately referred to, will erect a three-story brick building, 75x75 feet, to cost \$25,000.

Vernon, Texas.—R. S. Kelly, mayor, will receive proposals until June 20 for the erection of a brick school building.

Washington, D. C.—Permits have been granted to W. B. Downing for the erection of a brick dwelling to cost \$10,000; to A. J. Fisher for the erection of 7 brick dwellings to cost \$26,000; E. Carani will erect a dwelling to cost \$8,000; A. P. Fardon, 3 dwellings to cost \$10,000; G. S. Warmley, 10 dwellings to cost \$25,000; J. W. McGill, a six-story brick and office building, 90x85 feet, to cost \$70,000.

Washington, Ga.—The Methodists are reported as to erect a church to cost \$10,000.

Waycross, Ga.—The Pauly Jail Building & Manufacturing Co., St. Louis, Mo., is reported as to have secured contract for the erection of the jail lately reported.

A BIG ENTERPRISE.

Gen. Wilder to Build a City Near
Chickamauga National Park,
Chattanooga.

[Special to MANUFACTURERS' RECORD.]

CHATTANOOGA, TENN., June 11, 1890.

Genl. J. T. Wilder, for himself and other capitalists, has this week completed the purchase of 12,000 acres of iron ore and coal lands and 4,800 acres of town-site property, to be made the basis of a big development. The town-site includes Crawfish creek, with the water works supplying Chattanooga, and is immediately adjacent to the proposed Chickamauga National Park. Genl. Wilder's syndicate will build coke ovens, furnaces, immense hotel and provide other appointments of a city. The new city will become Chattanooga's aristocratic residence suburb. The location combines beauty, healthfulness, sentiment and business opportunities. The amount of money involved is \$5,000,000.

THE Baltimore & Potomac Co. held its annual meeting at its office in Baltimore, recently, and re-elected its old officers and board of directors. Mr. Oden Bowie is president, and Frank Thompson, vice-president. The annual report showed the gross earnings of the past year to be \$1,633,733.47, an increase over those of the previous year of \$94,606.96. Net earnings were \$373,282.45, a decrease over those of last year of \$136,279.18.

It was stated last week that the aggregate amount of the auction sales at Middlesborough the week before was \$1,019,099. This should have been given as the amount of sales from January 1. The amount realized in the three and a-half days of auction sales was \$865,625.

If you are not already a subscriber to the MANUFACTURERS' RECORD, send us \$4 and you will receive it regularly for one year or six months for \$2.00.

KIMBALL.

[Special Cor. MANUFACTURERS' RECORD.]

KIMBALL, TENN., June 7, 1890.

The arrangements for the christening sale at Kimball go on apace. Many hundred men are employed under the direction of General Superintendent Buck in opening roads, clearing ground and doing all that it is possible to do to enable the visitors, who are expected here by hundreds next Tuesday and Wednesday, to get a fair idea of this town-site and of the lay of the avenues, streets and lots. A water pipe has been laid from the lesser of the springs on the mountain side, and brought down to a beautiful meadow, where from a stand-pipe a jet is thrown 75 feet in the air. This meadow looks like a war-time camp, except that there are no soldiers to be seen, but there are long streets of wall tents of uniform size arranged with military precision, and some little distance from them, in the same meadow, are two very large canvas structures, in one of which the sale is to be made, and in the other the people are to be fed. Major C. C. McPhail, the accomplished practical geological expert, has a large force employed in opening some of the coal and iron veins, and in bringing specimens of the ore, coal and limestone to the sales pavilion. There, also, he has displayed sections of trees, showing the variety and character of the forest growth of this property. He has also secured from a woodworker of Jasper highly polished and varnished specimens of the same woods, showing what an abundance of material exists for every kind of wood-working establishment, from tooth-picks up to carriage and railway cars.

While it is impossible to forecast what the attendance will be, how many sales will be made, or what prices lots will bring, yet if any opinion can be based upon the number of people from a distance who are daily visiting Kimball, and upon the inquiries by letter and wire that are received at the headquarters in Chattanooga, then it is probable that this will be, notwithstanding the lateness of the season, one of the most successful initial sales that has ever taken place in the South. The conservative spirit of the men who control this enterprise has led them to adopt a system to regulate prices of lots, so as to prevent them from reaching the high figures that have caused considerable anxiety among conservative investors as to the future of these new town movements in the South. I send you herewith a sketch of that plan, which will be presented to the public for the first time when the sale opens next Tuesday.

I learn that a party of more than 40 eminent financiers and manufacturers of New England will leave New York by the Washington express to-night, and will reach Chattanooga at 5.30 Monday night. The list of names submitted to me comprises many men of national distinction in politics, finance and manufactures. Col. H. T. Sperry, of Hartford (who several years ago commenced to carry excursion parties of New England capitalists to the South), says in a letter that I have seen to-day: "This is the nineteenth party that I have made up and escorted to the South within the past five years. It has had no equal in the financial ability and popular influences which it wields." This is very strong language, but from personal knowledge of many of the gentlemen, I am satisfied that it is not exaggeration. Nashville, Knoxville, Fort Payne, Atlanta, Augusta, Raleigh, Charleston and many other cities will be represented here by wealthy and influential citizens. Quite a number of gentlemen from New York and its vicinity will accompany President Roots and Treasurer Bryant to the sale. As Kimball has at present neither theatre nor opera-house, nor any other place where visitors can congregate for their amusement,

the managers have arranged for an open-air concert by a fine military band on Tuesday night, at which time there will be a brilliant illumination and pyrotechnic display and various other things to interest the hundreds who will pass their night in Kimball.

I have been much interested in looking at some of the hundreds of letters that Managing Director Kimball is daily receiving from all parts of the country. Many of them are congratulations upon the success of the breaking ground ceremonies; others express the profound gratification of their writers that provision should have been made on such a liberal scale for the advancement of religion and education; others still are from men who wish to be informed about the details of the industrial building in which they are anxious to secure rooms at once; some are from large manufacturers, asking particulars connected with their own industries, and the plan of the company for its participation in all first-class establishments that may be located here. But best of all, in one sense, is the interest shown by young farmers of the Middle and Northwestern States, who have heard or read of this glorious climate and fertile soil, and who think seriously of pulling up stakes where they are and coming down here to settle upon these beautiful hill-sides, or on the rich table lands of the Cumberland mountains. Were the company prepared to put those lands upon the market to-day, it is probable from the interest manifested by these inquirers, that 500 families would be located on the company's property before next January.

I beg to repeat what, if I am not mistaken, has already been said in the MANUFACTURERS' RECORD, that a very large number of men connected with all branches of the building trades will be able to get remunerative employment here before a month has passed. Stores, residences and factories will be erected, and the demand for bricks and lumber of all sorts will be very great. There is now one small country store on the property. The merchants who come here now and establish themselves in business will, within a very short time, find that they will have all the trade they can handle.

While the company's auction sale of lots will continue but two days, yet that will not end the opportunity for people to purchase, but a standard of prices will have been established during those two days that will serve the management as a guide to future transactions, and as the policy of the company is not to inflate, but to keep prices within reasonable limits, it will be well for those who wish to settle in this new town, that is certain to be a great one, to come in and select their locations and build at as early a day as possible.

Mr. Kimball received yesterday a very earnest and impressive letter from Mr. H. C. Rushmore, of the Rushmore Hardware Co., of Fort Payne, Ala., urging the importance of setting apart at the beginning of development a fine site for a Young Men's Christian Association building. This request was at once appreciated by the management and acted upon, and a large lot most eligibly situated in the business center of the town has been devoted to that purpose. This is in entire keeping with the company's plan to aid religious and educational institutions.

The people of the entire Sequachee Valley and of Chattanooga, and of all the country round about it, are deeply interested in this new town enterprise, toward which all entertain the kindest feelings. The action taken yesterday by the Chamber of Commerce of Chattanooga is illustrative of this friendly spirit. The Chamber appointed a committee to arrange for a grand banquet in honor of the directors and officers of Kimball and their Northern guests, to be given Wednesday evening at Lookout Inn. Several hundred invita-

tions have been sent out to distinguished men in this and adjoining States to meet the Northern party, and to unite with them in congratulations to Messrs. Roots, Kimball, Bryant and their associates. This liberal and cordial spirit is in such striking contrast to the petty local jealousies that crop out now and then, that I deem it worthy of mention.

The Virginia Development Co.

The report of the directors of the Virginia Development Co. to its stockholders is a complement to the vast resources of Southwestern Virginia. The Virginia Steel Co., which the Development Company succeeded, has a capital stock of only \$100,000, and confined its operations almost entirely to the mining of iron ore. It was organized in October, 1887. In May, 1889, it was decided to greatly enlarge the scope of the company, and the name was changed to the present name and the capital stock was increased to \$5,000,000. Since then, the company has not only made large investments, but has been able to pay handsome profits. The stock is held mostly by Philadelphia, New York, English and Roanoke parties. Among the various companies in which the Development Company are interested are the following:

In the Southwest Virginia Improvement Co., to the amount of \$736,250 out of a capital stock of \$770,000. This company is the lessee of over 3,700 acres of the most valuable coal land in the Pocahontas Flat-top region, and is the largest producer of coal and coke in Virginia. The company has 400 coke ovens. It owns the town of Pocahontas, a large hotel, 300 tenement houses, stores, etc. The population of Pocahontas at present is about 7,000. The net earnings during the year were \$66,129. This company supplies coke to the furnaces in which the Development Company is interested, and to meet this demand the construction of 200 new ovens has been commenced.

In the Rorer Mining Co., \$99,500, the remaining five shares not having been issued. This company owns and operates the Rorer iron mines and six miles of narrow gauge railroad near Roanoke, and also owns valuable real estate in the city of Roanoke. The company has all the necessary washing machinery for turning out 3,500 tons of ore per month. Additional equipment is being ordered, and it is proposed to increase the output to 6,000 tons. It is proposed to sell the railroad and secure a broad gauge railroad, and thus decrease the cost of mining and handling ores.

In the Clark Summit iron mine property and equipment, \$50,000. Its present capacity is about 2,500 tons per month, which it is proposed to increase to 5,000 tons. This property comprises 660 acres of land and shows large quantities of brown hematite ore.

In the Allisonia iron mines, leasehold and equipment, \$10,000. It has a monthly capacity of 1,500 tons, which will be increased to 3,000.

In the Rocky Mount, Smith, Graybill & St. Clair iron ore properties, \$12,000, not yet in operation. The mine is now being opened up.

In the Buena Vista Co., \$50,000. With this stock a bonus in town lots was given, and the development company received 437 town lots. These lots have been sold for \$50,000. The stock of the company is now selling at about \$95 per share. The company has left on its magnificent iron ore property another fine town site.

In the Buena Vista Iron Co., \$50,000 of the \$200,000 capital subscribed, which will probably be increased to \$350,000. A furnace is being built with capacity of 125 tons per day. There is an abundant supply of ore of excellent quality within one to three miles of the furnace, which has

been leased on a royalty of 15 cents per ton of ore.

In the Salem Improvement Co., \$40,000 of the capital of \$300,000. These industries have already been secured at Salem: Blast furnace, tannery, sash, door and blind factory, Noyes brick works, Philadelphia brick and tile works, Graveley foundry and machine works, carriage factory, ice factory, woolen mills, Clement's sash, door, blind and building factory, wagon manufacturing company, Pierpont brick works and United silk manufacturing company.

In the Salem Furnace Co., \$50,000; total capital \$250,000, of which \$200,000 is subscribed. A furnace with a capacity of 100 tons a day is being built.

In the Graham Land & Improvement Co., \$50,000 of a total capital of \$250,000, all subscribed. It is believed that Graham will become an important iron manufacturing center. Already \$170,000 worth of lots have been sold. The total cost of the land of the company was only \$90,000. The stock has sold as high as \$145 per share. An iron furnace, saw mill, wood-working establishment, ice factory, flour mill and woolen mill have already been secured.

In the Graham Furnace Co., \$50,000 of the total capital, \$235,000, which will be increased to \$300,000. A furnace with a capacity of 125 tons is being built.

In the Max Meadows Land & Improvement Co., \$75,000 of the total capital of \$300,000, practically all subscribed. Max Meadows is one of the most beautiful locations for a town in Southwestern Virginia.

Max Meadows Iron Co., \$75,000 of the total capital of \$400,000, practically all subscribed. A furnace with a capacity of 135 tons per day is being constructed.

Morton Land & Improvement Co., \$25,000 of a total capital of \$200,000; all subscribed. This town-site is at the proposed junction of the Clinch Valley Division of the Norfolk & Western Railroad and the Louisville & Nashville Railroad.

This makes fourteen different enterprises in which the Development Company has an aggregate investment of \$1,372,750. But subscriptions have been made to the following enterprises which will call for \$268,000 more:

In the Crystal Spring Land Co., \$20,000 of a total capital of \$400,000, all subscribed. Its lands are located near Roanoke and promises to be valuable for town purposes. The Development Company had an interest in the property sold to this company, and made a clear profit of about \$30,000 out of the sale.

In the Roanoke Rolling Mill Co. Loan, secured by bonds, with the privilege of exchanging into stock, \$13,000.

In the Central Land Co. of Buchanan, \$50,000 of a total capital of \$1,250,000. Buchanan is located on the Shenandoah Valley Railroad, and on the main line of the Richmond & Alleghany Road. The James river flows through the town.

In the Radford West End Land Co., \$15,000 of a total capital of \$85,000. This company holds 300 acres of land adjoining Radford.

In the Virginia Real Estate Investment Association, \$100,000 of a total capital of \$500,000. The purpose of this association is to purchase town lots, erect buildings, and assist in building up the new towns in which the development company is interested.

In the Signa Bessemer iron ore mine in Cuba, it is proposed to invest \$70,000. The purpose is to encourage the manufacture of steel in Southwestern Virginia, and the company believes that this ore can be transported in the cars that go to Norfolk with coal but now return empty, and thus steel be economically made. The MANUFACTURERS' RECORD is of the opinion, however, that Bessemer ore developments, now being made in North Carolina, will demon-

strate the fact that it is not necessary to go to Cuba for steel ores.

The company also proposes to join with the Norfolk Coal & Coke Co. in developing a large tract of coal lands in the Elkhorn district, where 200 coke ovens are now in use and 200 more are to be built immediately.

The company has purchased a large interest in real estate at North Radford and intends to subscribe \$50,000 to a new furnace at Radford.

These numerous investments indicate what a great factor this development company is in the industrial development of Southwestern Virginia, and are also indicative of the marvelous growth of that region.

MACHINERY WANTED.

If you desire to purchase machinery of any kind consult our advertising columns, and if you cannot find just what you wish, send us particulars as to the kind of machinery needed. We will make your wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. You will thus get all information desired as to prices, etc.

Acid Phosphate Works.—The Cordele Guano Co., Cordele, Ga., wants bids for furnishing complete plant for the manufacture of acid phosphate from phosphate rock.

Bagging Factory.—W. A. Wilson, Americus, Ga., wants information as to size of buildings and amount of steam power and machinery required for the manufacture of from 1,000,000 to 1,500,000 yards of cotton bagging per year; also total cost of plant and any other information relative to the establishment and operation of such a factory.

Belting, Shafting, etc.—The Southern Lumber & Manufacturing Co., Chattanooga, Tenn., will probably purchase belting, shafting, pulleys, etc.

Boiler.—J. F. Cahoon, York Station, Ala., wants prices on a 20 horse-power boiler delivered.

Boilers and Engines.—The Wateree Cotton-seed Oil Mill, Camden, S. C., will purchase boilers and engines.

Boiler and Engine.—B. H. Bransford, Union City, Tenn., wants an 80 to 100 horse-power boiler and engine.

Boiler and Engine.—Charles B. Parker, Bluffton, Ala., wants prices on a 40 to 50 horse-power boiler and engine.

Boiler and Engine.—A 100 horse-power engine and boilers will be purchased for a cotton factory. Address J. A. Hadley, Beston, N. C.

Brick and Tile Machinery.—E. M. Johnson and D. J. McMillan, South Washington, N. C., want prices on brick and tile machinery.

Brush Factory.—M. B. Fulghum, Box 197, Griffin, Ga., wants prices on machinery for the manufacture of all kinds of brushes.

Candy Factory.—An outfit for a candy factory is wanted at La Grange, Ga. Address H. S. Her-ring.

Canning Factory.—The Putnam County Canning & Pickling Co., Eatonton, Ga., will purchase machinery for its factory.

Cars.—The Marion Street Railway & Hotel Co., Marion, N. C., will purchase cars for street railroad.

Cars.—The Cochran Ore Co., Hamlet, Polk county, Ga., will purchase two-ton mining cars, 18x25 feet.

Car Wheel Works.—C. B. Parker, Bluffton, Ala., wants a Putnam single car axle lathe, No. 1 car wheel boring machine, hydraulic wheel press with 48-inch copper lining, No. 8 Sturtevant steel pressure blower with double-counter shaft 42x16, 40 33 inch chills, 4 33 inch wheel patterns, one 72-inch cupola, with 1 large and 4 small ladles, an elevator, wheel breaker and 5 hand jib cranes.

Corn Mill.—W. W. Pearce, Beeville, Texas, will want a corn mill in the fall.

Corn Mill.—J. B. Hensley, Baird, Texas, will want a corn mill outfit for meal, feed, etc.

Cotton Compress.—S. T. Baird, Bastrop, La., will probably want machinery for a cotton compress.

Cotton-seed Oil Mill.—Beal & Wills, Morrilton, Ark., want specifications and net cash prices on complete plant for cotton-seed oil mills of 40 and 50 tons capacity per 24 hours.

Creamery.—D. J. McMillan, South Washington, N. C., wants machinery for a creamery and cheese factory.

Creamery.—S. P. White, Pulaski, Tenn., wants estimates on machinery for a creamery.

Derricks.—J. H. Pearson, Morganton, N. C., will want two derricks for granite quarry.

Electric Plant.—The Roanoke Power Co., Roanoke, Va., has not as yet awarded contract for its electric plant.

Elevator.—Mark & Blum, Galveston, Texas, will purchase a hand elevator for four-story building.

Elevator, etc.—The Columbus Investment Co., Columbus, Ga., wants prices on a passenger elevator for five or six-story office building; also on other requisite machinery for same building.

Engines and Boilers.—The Cochran Ore Co., Hamlet, Ga., wants two 40 horse-power boilers and a 25 to 40 horse-power engine.

Fertilizer Factory.—The Wateree Cotton-seed Oil Mill, Camden, S. C., will purchase machinery for a fertilizer factory.

Furnaces.—The Avondale Iron Works, Avondale, Ala., will want a furnace 15 or 16 feet long to heat bars full length, to a red heat for bending and furnace to heat 2,000 links per day for welding.

Furniture Factory.—S. L. Osborne, Augusta, Ga., wants prices on machinery for the manufacture of common furniture.

Furniture Factory.—L. S. Wilson, Box 395, Peru, Ind., will want a complete outfit of new machinery for furniture factory.

Ginnery and Grist Mill.—R. W. Rivenback, South Washington, N. C., wants prices on machinery for a cotton ginnery and grist mill.

Gin, etc.—E. M. Gallup, Hammond, La., will want a cotton gin, press and feeder.

Heating Apparatus.—The Columbus Investment Co., Columbus, Ga., desires to correspond with parties for the purchase of heating apparatus for a five or six-story office building, 72x140 feet.

Iron Brackets.—G. A. Conlon, Columbus, Miss., desires the address of foundries that will make small iron novelties, such as brackets, etc.

Laundry.—Thomas Hilditch, Jacksonville, Ala., will purchase steam laundry machinery.

Laundry.—B. H. Moss, Orangeburg, S. C., wants prices on machinery for a steam laundry.

Planer and Matcher.—H. Barker, Waldo, Fla., wants a new planer and matcher.

Presses, Dies, etc.—John Walter, Palatka, Fla., will want presses, dies, etc.

Rails.—The Marion Street Railway & Hotel Co., Marion, N. C., wants prices on rails for electrical or dummy railroad 1½ miles long.

Rails.—The Cochran Ore Co., Hamlet, Polk county, Ga., will purchase 40 tons of 35-pound rails.

Resawing Machine.—N. Cox, Son & Co., Mofitts Mills, N. C., want prices on a 24-inch resawing machine.

Sanding and Grinding Machinery.—W. R. Burgess, Greensboro, N. C., wants information on machinery for sanding and grinding soapstone.

Saw Mills.—G. H. King & Son, Kansas City, Mo., will probably purchase four saw mills, each to have a daily capacity of 50 M feet for a new town in East Tennessee.

Scale.—E. M. Gallup, Hammond, La., will want a 3-ton platform scale.

Shafting, Belting, etc.—C. B. Parker, Bluffton, Ala., wants prices on shafting, hangers, pulleys and belting.

Spoke Factory.—B. N. Bransford, Union City, Tenn., wants 10 or 12 lathes, exhaust fans, conveyors and all other machinery necessary for a first-class spoke factory.

Spoke and Handle Factory.—Brewer & Holding, Raleigh, N. C., may want spoke and handle machinery.

Stave and Shingle Machinery.—G. H. King & Son, Kansas City, Mo., will probably want stave and shingle machinery for a new town in East Tennessee.

Typewriters.—D. J. McMillan, South Washington, N. C., wants prices on typewriters.

Veneer Machines.—The Madison Variety Works, Madison, Ga., wants prices on veneer machines.

Water Rams.—W. E. H. Searcy, Griffin, Ga., wants prices and catalogues of water rams.

Water Wheel.—The Roanoke Power Co., Roanoke, Va., will purchase water wheels.

Water Works.—Nelson Tift, Albany, Ga., will receive bids for sinking an artesian well 750 feet deep, erecting a brick tower 100 feet high with tank on top, 20x35 feet, and boiler, engine, pump and pipes with capacity to elevate 50 to 100 gallons per minute to the tank.

Woodworking Factory.—F. D. Meade, Lake Charles, La., will purchase a cabinet-makers planer, improved 7-inch moulder, scroll saw, single spindle shaper, mortiser, wood-turning lathe, spoke and handle lathe, etc.

Woodworking Machinery.—The DeKalb Manufacturing Co., Alexandria, Tenn., will purchase woodworking machinery. Address J. F. Ray.

Woodworking Machinery.—The Southern Lumber & Manufacturing Co., Chattanooga, Tenn., will probably purchase resaw, surfacing, flooring and sand papering machinery.

Hercules Ice Machines

FOR

Ice Making, Cold Storage, Packing Houses, Breweries, &c.

Send for our new illustrated circular.

Hercules Iron Works, - - - Chicago, Ill.

WATER POWER UTILIZED.

at any distance from source by ELECTRICAL TRANSMISSION. The simplest, cleanest and cheapest to operate for Mining, Street Railways, Electric Lighting and Manufacturing.

G. S. VAN NUIS, Constructing Electrical Engineer,
74 CORTLANDT STREET, NEW YORK.

RAEDER, COFFIN & CROCKER,

ARCHITECTS

Rooms 916-919, 218 LaSalle Street, Chicago,

Special Designers of Industrial Plants.

Completely Equipped Shops, Foundries, Warehouses. Cotton and Woolen Mills, Grain Elevators, &c

HENRY RAEDER, Architect; A. S. COFFIN, B. S. CROCKER, Engineers.

O. R. MAKEPEACE & CO.
ARCHITECTS and MILL ENGINEERS
PROVIDENCE, R. I. Plans, Specifications and Estimates furnished for Cotton and Woolen Mills.

LOCKWOOD, GREENE & CO.

Mill Architects and Engineers,

HAVE REMOVED TO

131 Devonshire Street, Boston, Mass.

Mr. Stephen Greene will devote his personal attention to the management of the business.

Nier, Hartford & Mitchell, ENGINEERS,

Water Works, Sewerage, Electrical Works and Municipal Improvements.

Richardson Block, CHATTANOOGA, TENN.



THE BROUGHTON
MIXER
FOR
Wall Plaster and Fertilizers.
MANUFACTURED BY
W. D. DUNNING,
96 W. Water St., Syracuse, N. Y.
SEND FOR CIRCULAR.

the BOOMER & BOSCHERT KNUCKLE JOINT PRESS

FOR BALING
Cloth, Paper, Yarn, &c.Or for any other purpose requiring
great pressure.BOOMER & BOSCHERT PRESS CO.
329 W. Water St. Syracuse, N. Y.


DO YOU
BELIEVE
IN SIGNS

JORY & CO.
Make Everything in
SIGNS
Baltimore & Light Sts.
BALTIMORE.

DREW, BALDWIN & CO.

COTTON MILL

Architects and Engineers,
45 Broadway, New York.WRITE FOR PRICES TO
THE SOUTHERN EQUIPMENT CO.
Representing reliable manufacturers of
Railway, Mining and Mill Supplies.
ORDERS FILLED PROMPTLY.
Chattanooga, Tenn.

D. C. GILES, Electrical Engineer,

396 E. WATER ST., ELMIRA, N. Y.

Plans and Specifications of Electrical Installations and Construction of same superintended. Special Apparatus designed or perfected. Send for Folder.

GRAY & FITCH, MILL ARCHITECTS & ENGINEERS,

264 Essex Street, Lawrence, Mass.

Plans executed for the best modern mill construction. Especial attention given to arrangements of power plants, shafting, etc.

KNOXVILLE, TENN. Room 10, City Hall. P. O. Box 21. WRIGHT & WOOD, Civil & Sanitary Engineers.

Sewerage, Drainage, Water Supply, Municipal Work, Surveys, Estimates, Specifications, Superintendence.
J. C. WRIGHT, C. E. C. F. WOOD, Jun. Am. Soc. C. E.


CHAS. E. MANOR,
Mill Builder and Furnisher and Mechanical Engineer,
DIRECTOR OF
COMPLETE ROLLER MILLS,
SANDS P. O., PAGE CO., VA.
Send for Catalogue.

STEIN & SCHWARZ, 323 WALNUT STREET, PHILADELPHIA, PA.

General Chemical and Metallurgical Works, Gas Furnaces and Gas Producers. Examination of Mineral Lands. Chemical and Metallurgical Analyses of every description. Chemical Investigations and Reports.

OTTEN & WESTENHOFF, Analytical & Consulting Chemists.

Chemical Analysis of Iron Ore, Pig Iron, Steel, Limestone, Coal, Mineral Waters, Fertilizers, &c. Physical Tests of Iron, Steel and other Building Materials and Lubricating and Illuminating Oils, etc. Examination of Mining Properties.
Office and Laboratory, 17 W. Third St., Cincinnati, O.

J. H. PRATT, ANALYTICAL CHEMIST & MINING ENGINEER

1826 Third Avenue, Birmingham, Ala.

Chemical Investigations, Analyses of Ores, Slags, Coals, Waters, &c. Reports on Mineral Properties, &c. Correspondence solicited.

PILE DRIVING MACHINERY.



VULCAN IRON WORKS
CHICAGO

Vulcan Iron Works, Chicago.
Send for our 1890 Catalogue.

PROPOSALS.

SEALED PROPOSALS will be received at the office of the Supervising Architect, Treasury Department, Washington, D. C., until 2 o'clock P. M., on the 21st day of June, 1890, for the erection and completion (except approaches and heating apparatus) of the U. S. Courthouse and Postoffice building at Statesville, N. C., in accordance with drawings and specification, copies of which may be had on application at this office or the office of the Superintendent. Each bid must be accompanied by a certified check for \$500. The Department will reject all bids received after the time fixed for opening the same; also bids which do not comply strictly with all the requirements of this invitation. Bids must be enclosed in an envelope sealed and indorsed "Proposal for the erection and completion (except approaches and heating apparatus) for the U. S. Courthouse and Postoffice building at Statesville, N. C.," and addressed to JAS. H. WINDRIM, Supervising Architect. May 28th, 1890.

SEALED PROPOSALS will be received at the office of the Supervising Architect, Treasury Department, Washington, D. C., until 2 o'clock P. M., on the 21st day of July, 1890, for all the labor and materials required to erect complete the buildings of the U. S. Marine Hospital at Evansville, Indiana (except heating apparatus), in accordance with the drawings and specification, copies of which may be had on application at this office or the office of the Superintendent. Each bid must be accompanied by a certified check for \$500. The Department will reject all bids received after the time fixed for opening the same; also bids which do not comply strictly with all the requirements of this invitation. Proposals must be sealed and endorsed "Proposal for U. S. Marine Hospital buildings at Evansville, Ind.," and addressed to JAS. H. WINDRIM, Supervising Architect. June 4th, 1890.

SEALED PROPOSALS will be received at the office of the Supervising Architect, Treasury Department, Washington, D. C., until 2 o'clock P. M., on the 28th day of June, 1890, for all the labor and materials required to fix in place complete the low pressure steam-heating apparatus, required for the United States Custom House and Postoffice building at Plattsburgh, New York, in accordance with the drawings and specification, copies of which may be had on application at this office or the office of the Superintendent. Each bid must be accompanied by a certified check for \$500. The Department will reject all bids received after the time fixed for opening the same; also bids which do not comply strictly with all the requirements of this invitation. Bids must be enclosed in an envelope sealed and endorsed "Proposal for low pressure steam-heating apparatus for the U. S. Custom House and Postoffice building at Plattsburgh, New York," and addressed to JAS. H. WINDRIM, Supervising Architect. June 4th, 1890.

SEALED PROPOSALS will be received at the office of the Supervising Architect, Treasury Department, Washington, D. C., until 2 o'clock P. M., on the 28th day of June, 1890, for all the labor and materials required in the erection and completion of the U. S. Courthouse and Postoffice building at Texarkana, Ark.-Tex. (heating apparatus and approaches not included), in accordance with the drawings and specification, copies of which may be had on application at this office or the office of the Superintendent. Each bid must be accompanied by a certified check for \$500. The Department will reject all bids received after the time fixed for opening the same; also bids which do not comply strictly with all the requirements of this invitation. Proposals must be sealed and endorsed "Proposal for the erection and completion (except heating apparatus and approaches) of the United States Courthouse and Postoffice building at Texarkana, Ark.-Tex.," and addressed to JAS. H. WINDRIM, Supervising Architect. June 4th, 1890.

SEALED PROPOSALS will be received at the office of the Supervising Architect, Treasury Department, Washington, D. C., until 2 o'clock P. M., on the 27th day of June, 1890, for furnishing and putting in place complete the iron floor, ceiling and roof construction, iron columns with terra cotta covering, brick and terra cotta floor and ceiling arches, sky-lights, constructive iron work of stairs wood sheathing, terra cotta tiles, slate and copper work of roofs, down-pipes, &c., required for the United States Courthouse and Postoffice building at Birmingham, Alabama, in accordance with the drawings and specification, copies of which may be had on application at this office or the office of the Superintendent. Each bid must be accompanied by a certified check for \$500. The Department will reject all bids received after the time fixed for opening the same; also bids which do not comply strictly with all the requirements of this invitation. Proposals must be sealed and endorsed "Proposal for Iron Floor, Ceiling and Roof Construction, Iron Work of Stairs, &c., of the U. S. Courthouse and Postoffice building at Birmingham, Alabama," and addressed to JAS. H. WINDRIM, Supervising Architect. June 7, 1890.

PROPOSALS FOR MAIL-BAG CORD-FASTENERS.

POST OFFICE DEPARTMENT,
WASHINGTON, D. C., May 1, 1890.
SEPARATE SEALED PROPOSALS from patentees or their assignees will be received at this Department until noon on the twenty-ninth day of July, 1890, as follows:

Proposals for furnishing mail-bag cord-fasteners for use by the Post Office Department: Said proposals to state the amount of royalty, if any, charged for patent device, price at which patent device, if any, will be made, and price at which mail-bag cord-fastener will be furnished complete, including royalty.

Proposals must be in accordance with the specifications and forms of proposals, which will be furnished on application by letter to the Second Assistant Postmaster General.

The contracts which may be made will be in conformity to the specifications and the accepted proposals.

The right is reserved to reject any or all the proposals.

JOHN WANAMAKER,
Postmaster General.

If you wish to keep posted on the progress of the South, read the MANUFACTURERS' RECORD. Price \$4.00 a year.

WANTS.

WANTED.—A position where 14 years experience in handling men and machinery will be valuable to employer. Address F. G., care Manufacturers' Record.

WANTED.—A situation in the South. Have had 12 years experience in the management of fertilizer factory and acid chambers. Address X. Y. Z., care Manufacturers' Record.

NOTICE.

Wanted the best MACHINE FOR EXTRACTING GREASE FROM BONES. Address "BOX 40," Raleigh, North Carolina.

Cotton Seed Oil Mills

We are making various sizes from the Plantation Mills of 4 tons to the large city mill of 50 tons per day. Our mills have all the latest modern improvements in machinery, and produce the very best results. Send for circular.

CARDWELL MACHINE CO., Richmond, Va.

Textile Machinery

FOR SALE.

Picking, Carding, Roving, Spinning, Spooling, Twisting, Reeling, Winding, Weaving and Finishing for Cotton and Woolen Mills. Very large stock to select from in our storehouses here, of over two acres of storage.

JEREMIAH CLARK,

Lowell, Mass. Office, 63 Dutton St.

FOR SALE.

Foundry & Machine Shop,

PATTERNS, &c.

1 1/4 acres of ground, centrally located in city. Ready established trade. Three railroads running within 50 yards. To be sold for a division, on account of the death of both partners. Full particulars will be furnished to enquiring parties by writing to

MURRAY & STEVENSON,

P. O. Box 345. ANNISTON, ALA.

For Sale at a Bargain.

The plant of the CALDWELL PRINTING COMPANY at Birmingham, Ala., consisting of 3 Cylinder Presses and 5 Jobbers, Bindery, Type, etc., making

A COMPLETE MODERN

Printing Establishment.

Most of machinery, type and bindery bought in the past three years. Will be sold at

50 CENTS ON THE DOLLAR.

This is one of the largest plants in the South and the largest in Birmingham, there being only two other offices in the city.

Other business interests of the proprietors necessitates an immediate sale. This is positively the best opportunity ever offered. For particulars address

C. H. CALDWELL, Prest.

Drawer 890. Birmingham, Ala.

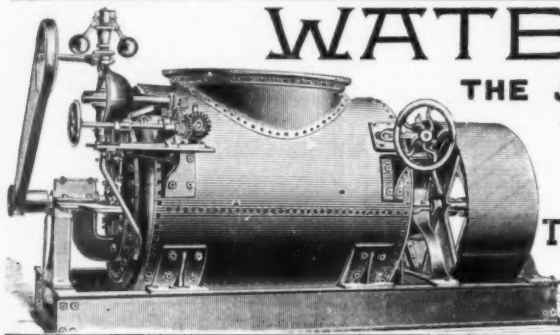
POPULAR AND DIRECT ROUTE.

THE BAY LINE

For Old Point Comfort, Norfolk and the South.

Steamers leave daily (except Sunday) Union Dock 6.30 P. M., Canton Wharf 7 P. M.; arrives Old Point Comfort 7 A. M., at Norfolk at 8 A. M., Portsmouth 8.15 A. M. AT OLD POINT COMFORT connect with CHESAPEAKE & OHIO RAILROAD for Richmond, Charlottesville, Greenbrier, White Sulphur Springs, Louisville, Cincinnati and all points West. AT NORFOLK with NORFOLK & WESTERN RAILROAD for Petersburg, Richmond, Lynchburg, Roanoke, Bristol, Knoxville, Chattanooga, Memphis and the Southwest; also with the NORFOLK SOUTHERN RAILROAD for Elizabeth City, Edenton and Eastern North Carolina. AT PORTSMOUTH, VA., with SEABOARD & ROANOKE RAILROAD for Weiden, Raleigh, Southern Pines, Charlotte, Fayetteville, Newberry, Wilmington, Charleston, Columbia, Augusta, Savannah, Jacksonville and all PRINCIPAL SOUTHERN CITIES.

Palace Steamers, Unsurpassed Cuisine, Undisturbed Night's Rest. Safe Connections. For Tickets and information apply at Company's Office, 129 E. Baltimore St. or on board steamers.
R. BROWN & T. A. KENNEDY TOWNS, Agents



WATER WHEEL.

THE JAMES LEFFEL TURBINE

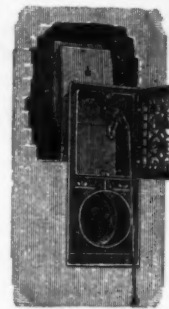
On Horizontal Shaft.

More than 20 varieties of this style built by

THE JAMES LEFFEL & CO.

Springfield, Ohio, and 110 Liberty Street, New York City.

Send for our Fine Pamphlet and other Information



If you desire the Agency in your Town or Locality for the

Ekstrom Ventilator,

Send for application blank and particulars to

CHENEY & HEWLETT,
207 Broadway,
NEW YORK CITY.

Please mention paper.

E. DeF. SHELTON,

Representing CITIES AND TOWNS in the Locating of Manufacturing Enterprises.

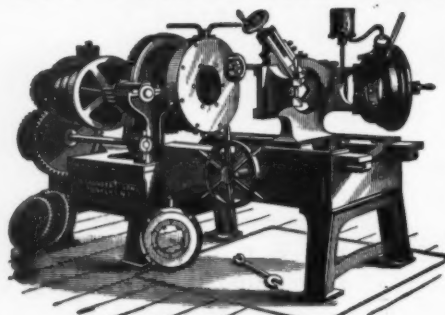
We represent a limited number of cities and towns throughout the country, varied in their facilities, and with unusual advantages for manufacturing in all branches, and offering liberal inducements for the location of manufacturing industries. Investigate before you start or relocate your factories.

E. DeF. SHELTON,

57 BROADWAY, NEW YORK.

No Charge for Information Furnished the Manufacturer by this Agency.

D. SAUNDERS' SONS



SEND FOR CIRCULARS.

MANUFACTURERS OF
Pipe Cutting and
Threading Machines,
For Pipe Mill and Steam
Fitters' Use.

Tapping Machines

For Steam Fitting. Also,

STEAM AND GAS FITTERS
HAND TOOLS,
Atherton Street.

Send for Catalogue B.

YONKERS, N. Y.

WIER & WILSON,

DIRECT REPRESENTATIVES:

HUBBARD & Co., Axes, Shovels, Hoes and Saws.

AMERICAN SCREW COMPANY, Screws, Bolts, Wire Nails, &c.

A. FIELD & SONS, Tacks and Nails.

WHEELING HINGE COMPANY, Wrought Goods, Butts, &c.

L. D. FROST & SONS, Philadelphia Carriage Bolts.

JOHN SOMMERS' SON, Faucets.

NICHOLSON FILE CO., Files.

HARTFORD HAMMER CO., Hammers and Sledges.

THE HENRY C. HART MFG. CO., Screen Frames, Spring Hinges, &c.

SHEBLE & KLEMM, Forks.

HOLROYD & CO., Stocks and Dies.

CLARK BROS. & CO., Bolts, Nuts, etc.

BRANFORD LOCK WORKS.

WHITE MOUNTAIN FREEZER CO.

BLAIR MFG. CO., New, Easy and Bay State Lawn Mowers.

WINCHESTER HANDLE CO., Fork, Shovel, Hoe Handles.

SAMSON CORDAGE WORKS, Braided Sash Cord, etc.

OLD DOMINION IRON & NAIL WORKS CO., Walker's Horse and Mule Shoes.

PLUME & ATWOOD MFG. CO., Copper Rivets, Jack Chains, Lamps, etc.

JOHN C. SCHMIDT & CO., Trace & Coil Chain.

EXCELSIOR HOOK & BACK BAND CO., NEW SCOTT MFG. CO., Fruit Parers, etc.

KLINE, LOGAN & CO., Picks, Mattocks, etc.

RIVER FOUNDRY CO., Lull & Porter Hinges, Pulleys, etc.

OFFICE—No. 14 W. German St., BALTIMORE, MD.

HOTEL LUCERNE

J. HARRY CHAPMAN, Proprietor, Maj. J. P. LONGLEY, General Manager.

SALEM, VA.

SPECIAL ATTENTION PAID TO TRANSIENT GUESTS.

ACCOMMODATIONS FIRST-CLASS.

Fine Sample Rooms for Drummers.

Rates Reasonable.

Mineral Lands, City Lots,

GRASS, GRAIN AND FRUIT FARMS FOR SALE.

ADDRESS

F. J. CHAPMAN, - - Salem, Va.

Salem Foundry & Machine Shop

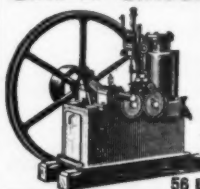
—SALEM, MASS.—

ELEVATORS,

—AUTOMATIC HATCH DOORS, AUTOMATIC LOCK GATES.—

Send for Illustrated Circular.

VAN DUZEN GAS & GASOLINE ENGINE



OPERATED with COAL and OTHER MANUFACTURED GASES AND GASOLINE.

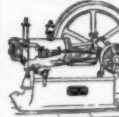
RELIABLE AND ECONOMICAL.

Fully Warranted

VAN DUZEN Gas & Gasoline Engine Co. 56 E. 2d St., Cincinnati, O.

The Motor of the 19th Century.

2 to 40 H. P.



Economy, Reliability, Simplicity, Safety.

ENGINE CO., P. O. Box 240, Sterling, Ill.

The SIMMERLY DERRICK



This is a revolving Derrick which makes a perfect circuit from either right or left. It can be worked from a lighter or Steamer same as on solid ground. It is adapted for the hoisting of stone, iron ore, coal or any material, and can be used with or without the bucket. Capacity in one lift ranges from one to five tons. Further particulars on application to

Simmerly Derrick Co.

101 Center Street, Cleveland, Ohio.

Established 1867.

E HARRINGTON, SON & CO.

Works and Office,

N. 15th St. & Penna. Ave., Phila., Pa., U.S.A.

Manufacturers of a full line of

Iron Working Machinery.

INCLUDING

Extension and Gap Lathes, Planers with Quick Return, Drills, &c. Hand Power Elevators with Patent Brake, Double Chain Screw Hoist, Overhead Tramway, with Switch, Turntable and Geared Truck.



Gear Cutting a Specialty. Send for estimates.

Represented by J. O. MAYNARD, 12 Cortland St., N. Y.; C. E. KIMBALL, 93 Oliver St., Boston; W. BUCHNER, 108 Main St., Cincinnati.

McShane & Bell Foundry

Fine Iron and Brass Castings Made to Order.

Manufacture those celebrated Bells for Towers, Clocks, Court-Houses, Cotton Mills, Factories, &c. Prices and catalogues sent free. Address: H. McSHANE & CO. Baltimore, Md. Mention this Paper.



J. A. HOOVER,

P. O. Building, MORRISTOWN, TENN.

Real Estate Agent.

Lands bought and sold on commission.

JOE H. BUSBEY

REAL ESTATE

—AND—

Investment Agency,

TREDECAR

(P. O. Jacksonville, Calhoun County, Ala.)

Correspondence solicited.

R. K. WRIGHT, JR.

Real Estate and Insurance

GRAHAM, Tazewell Co., VA.

REPRESENTING

Graham Land & Improvement

Co. and Niagara Fire Insurance Co. of N. Y.

THE UNION MANUFACTURING COMPANY.

Owing to the large demand for machines, offer a limited amount of stock at

\$6.00 PER SHARE.

Machines cost only \$8, and the net income from each is \$42 per annum.

We would consider it a favor to have you make the closest investigation.

Make all checks payable to

R. H. WHITNEY & CO.

75 State Street, BOSTON, MASS.

Standard Land Co.

INCORPORATED.

CATLETTSBURG, KY.

Has for sale valuable Timber, Coal and Iron Ore Lands in Kentucky, West Virginia and Virginia, cheap. Write for descriptive list.

To Those Looking For MANUFACTURING SITES IN THE SOUTH

The most desirable locations in the South for manufacturing wagons, stoves, agricultural implements, furniture, or for foundries, machine shops, rolling mills, muck bar mills, nail works, glass works, cotton or woolen mills, and tanneries, are to be found in Virginia along the line of the Norfolk & Western Railroad from Norfolk to Bristol, and upon its branch lines. Hard wood of every variety; pig iron from the furnaces at Lynchburg (2), Roanoke (2 in operation and 1 now under construction), Pulaski (1), Ivanhoe (1), Radford (1, to be built in 1890), Salem, Graham Max Meadows and Bristol (1 at each point now under construction), bar iron from the rolling mills at Roanoke, Lynchburg and Richlands (1 to be built in 1890); coke and semi-bituminous coal from the Pocahontas Flat Top field; superior gas coals from the mines on the Clinch Valley Extension; glass sand from Tazewell county; cotton from the markets of the Southern States, and wool from all the Western and Southwestern States and Territories at advantageous freight rates. Favorable freight rates made upon raw materials to all factories established upon its line, as well as to points in the United States and Territories upon the manufactured articles.

Those seeking new fields for manufacturing establishments should not fail to investigate the wonderful development of iron, coal and coke industries that has been made within the past five years along the line of the Norfolk & Western Railroad, and the advantages offered by the State of Virginia in the supply of cheap raw materials; by the Norfolk & Western Railroad in the matter of freight facilities and rates upon raw materials and for reaching home, far distant and foreign markets, and by the cities and towns along its line in the way of advantageous sites at moderate cost. Many of the cities and towns exempt manufacturing establishments from taxation for a series of years.

For further information as to freight rates and sources of supply of raw materials, apply to A. Pope, General Freight Agent, Roanoke, Va., or to

CHAS. G. EDDY,

Vice-President, Roanoke, Va.

RADFORD, VA.

Town Lots, Mineral, Timber and Farm Lands.

We have many large and small tracts.

Iron Ore, Coal, Glass, Sand, Marble, Building Stone, and Several Mineral Springs, of Wonderful Curative Properties.

The best of farming and grazing lands. No malaria. No mosquitoes. Salubrious climate. Gorgeous scenery. Water power unlimited. Factory sites donated. Property at first hands, so get in on "rock bottom." Write to or call on

BARCLAY & CROCKETT,
The leading Real Estate Agents of Southwestern Virginia. RADFORD, VA.

TAX EXEMPTION —FOR— MANUFACTURERS.

An Ordinance to abate for ten years from the 1st day of July, 1889, under certain conditions, the personal taxes on mechanical tools and implements used in manufacturing within the limits of the city of Norfolk, Va:

WHEREAS, the geographical situation of the City of Norfolk, its convenient and commodious harbor, the ample means of transportation tributary to it, the abundant supply of lumber, coal, iron, cotton and other materials easily accessible, and its other natural and acquired advantages, offer superior inducements to manufacturing and other business enterprises, and whereas the city is desirous of fully developing and utilizing these advantages and, to that end, of encouraging the investment of capital in, and the establishment of various manufacturing enterprises within its limits or immediate vicinity, therefore,

SEC. 1. Be it ordained by the Select and Common Councils that the Finance Committee of the Councils be, and it is hereby authorized and directed upon the application of any individual, firm or corporation, actually engaged in the business of manufacturing in the city of Norfolk, to abate any and all personal taxes which may be levied hereafter for any of the corporate uses thereof upon any mechanical tools or implements, whether worked by hand or by steam or other motive power, or upon any machinery, manufacturing apparatus or engines owned by such individual, firm or corporation, and actually employed and used in the business of manufacturing in said city; provided always, that such application for an abatement of taxes in any year shall be made before the annual levy is made by the Commissioner of the Revenue, and provided also that every application for such abatement shall be verified to the satisfaction of said Finance Committee by the oath of the party applying for the same or other satisfactory evidence, and provided further that no abatement or exemption shall be made under this ordinance until a manufacturing enterprise or business, in which shall be actually invested a capital of not less than \$25,000, and which is not at present established or carrying on business within the limits of the city of Norfolk, shall be established within such limits.

SEC. 3. And be it further enacted and ordained that nothing herein contained shall be construed to authorize any abatement of taxes levied upon property assessable and taxable as real estate.

SEC. 4. And be it further ordained that this abatement or exemption shall extend for the space of ten years from 1st of July, eighteen hundred and eighty-nine.

SEC. 5. This ordinance shall be in force from its passage.

Adopted as amended by the Select Council November 12, 1889.

(Signed) **FRANK MORRIS,**
President Select Council.

Adopted by the Common Council December 3d, 1889.

(Signed) **H. HODGES,**
President Common Council.

A true copy.
W. W. HUNTER,
City Treasurer.

DENISON,

TEXAS.

Future Manufacturing and Commercial Center OF THE GREAT SOUTHWEST.

DENISON SUPPLIES THE COAL FOR TEXAS.

She has at her gates the only **COKING COAL** of any value in the Mississippi Valley. To the Southwest lies the best **MAGNETIC IRON ORE** in the world, while to the north and Southeast are fields of **BROWN HEMATITE ORE** of the finest grade. These ores must meet the **COKE** and **COAL** at **DENISON** and there to be worked.

DENISON cannot be surpassed for **HEALTHFULNESS** and **BEAUTY** of location. Six divisions of railways terminate at Denison and are operated by her citizens.

DENISON has an abundant supply of pure, soft water and plenty of good, cheap **BUILDING MATERIAL**.

The attention of investors and those seeking advantageous locations for business or for manufacturing plants is invited to the opportunities presented at Denison.

MUNSON & BRO. HAVE SUPERIOR FACILITIES FOR THE SAFE AND PROFITABLE INVESTMENT AND HANDLING OF CAPITAL.

For information about **DENISON** and for bargains in **BUSINESS** and **RESIDENCE PROPERTY**, **ACRE PROPERTY** and **FARMS NEAR THE CITY**, write or call upon

MUNSON & BRO.

301 WOODWARD STREET,

DENISON, TEXAS.

REAL ESTATE

—FOR—

Investment or Speculation.

One of the Most Solid and Substantial of all the Southern Towns is

BRISTOL, TENN.

It is in the center of the richest mineral, timber and agricultural sections of the South—East Tennessee and Southwest Virginia.

It is becoming an important railroad center.

It has now a population of **10,000**, which is increasing every day.

It has in the **HOTEL FAIRMOUNT** one of the handsomest and most thoroughly equipped hotels in the South.

It has in operation car shops, planing mills, foundries, woolen factory, cotton factory, carriage factory, veneer factory, canning factory, planing mills, brick-yards, &c. An iron furnace to cost \$300,000 has been contracted for.

The climate of Bristol makes it a natural sanitarium the year round.

There is no better place in the South for profitable real estate operations.

Some of the best business, residence and suburban property in the town is controlled by

W. A. R. ROBERTSON,

Real Estate Agent.

Write to him for details. He is giving particular attention now to two or three special things that will pay big profits on short turn.

Band Saw Re-Sawing Machine.

This machine has recently been put on the market by the S. A. Woods Machine Co., 172 High street, Boston. The annexed engraving furnishes a sufficiently clear idea of the machine to render unnecessary any extended description, and the name of its

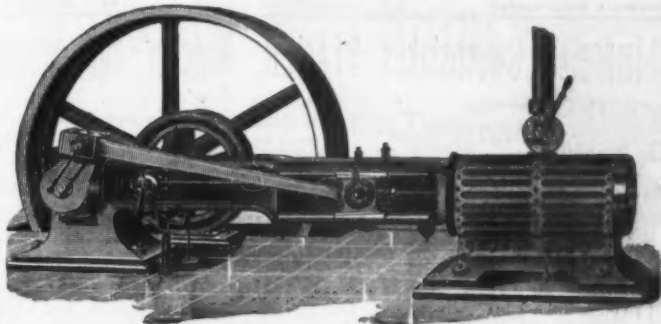
THE Salem Wire Nail Co., of Salem, Ohio, reports trade good. Its factories are running night and day to keep up with orders. This company has purchased in the past year the large wire nail plant situated at Findlay, Ohio. The output of its two mills is now 2,400 kegs per day, making this one of the largest wire nail plants in the world. The product is shipped all

E. J. WOOD,

Consulting Engineer and Contractor,

243 BROADWAY, NEW YORK.

Superintendent of the Construction and Erection of Factories,
Steam Plants and all kinds of Machinery.
Engines Indicated, Valves Adjusted and Power Measured.



COMPLETE STEAM PLANTS. BOILERS, ENGINES, Every Description,
SHAFTING, PULLEYS, HANGERS.
DRAWINGS AND SUPERINTENDENCE. ECONOMY GUARANTEED.
CORRESPONDENCE SOLICITED.

I also make a Specialty of Taking Down, Removing and Reerecting Steam Plants and Machinery of every description. Send for Catalogue F.

HARRISON

Merits Proven by Over
Twenty Years' Practical Work.

Combine Maximum Safety,
Economy of Fuel, Durability.

SAFETY

All sizes from 4
H. P. to 240 H. P.

Ease of Transportation, Erection and Repair.
Full Particulars, Drawings and Estimates mailed upon application.

BOILERS.

HARRISON SAFETY BOILER WORKS, Germantown Junction, Philadelphia, Pa.
Southern Office, 9 to 13 N. Pryor street, Atlanta, Ga.

THIS SPACE RESERVED FOR THE

PULSOMETER STEAM PUMP CO.

120 Liberty Street, New York.

Send for Illustrated Catalogue "F."



Improved Screw Cutting
FOOT AND POWER LATHES

Drill Presses, Shapers, Band, Circular and Scroll
Saws, Machinists' Tools and Supplies. Lathes
on trial. Catalogue mailed on application.

THE SEBASTIAN-MAY CO.

182 West Second St., CINCINNATI, O.



makers is a sufficient assurance of its efficiency.

The feed rolls will receive lumber six inches thick and 14 inches wide. The feed mechanism consists of four rolls supported in frames which are gibbed to a strong base. The power to drive the rolls is communicated from a friction pulley on the lower wheel shaft. The rate of feed, or direction can be changed without stopping the machine. The feed can be started or stopped instantly. The feeding attachment can be disconnected and removed in a few minutes. The track of the blade on the wheels can be regulated while machine is running. Tight and loose pulleys are 16 inches diameter, 4 1/2 inches face, and should make from 500 to 600 revolutions per minute.

THE Mt. Carmel Machine & Pulley Co., of Mt Carmel, Ills., has bought the plant and good-will of "The Standard Manufacturing Co." of that city. In moving from Edinburgh to Mt. Carmel last fall, they erected a large building and placed in it the latest improved machinery with modern designed foundry. Machine shops were erected for the purpose of manufacturing a patent pulley, together with patent band saws, etc. Arrangements have been nearly completed to resume work. Some of the best business men of Mt. Carmel organized the new company, and will at once enter upon manufacturing on an extensive scale these well-known goods.

over the country. This plant, under the management of Mr. F. Baackes, has had a steady growth since it was started in 1885. They employ about 650 hands.

If you wish to keep posted on the progress of the South, read the MANUFACTURERS' RECORD. Price \$4.00 a year.

WM. SIMPKIN A. S. M. E.

SIMPKIN & HILLYER,

ENGINEERS and CONTRACTORS

RICHMOND, VA.

Manufacturers of and Agents for Steam Engines, Boilers, Pumps and Heavy Machinery. Economical Steam Plants, Rope and Belt Driving. Special Machinery for Chemical and Fertilizing Works, Gas, Water and Creosote Works. A specialty of the "Warwick" Pole Road Locomotive, "Warwick" Tram Road Locomotive, and the "Warwick" Silent Steam Street Motor. Castings furnished. Repair work solicited. Consultations, Arbitrations and Valuations. Engines indicated. Plans, Specifications and Estimates prepared. Correspondence invited.

WORKS—Newport News, Va.

GENERAL OFFICE—1105 Main St., Richmond, Va.

SEND ALL REPAIRS TO OUR WORKS.

HERMANN SCHMIDT, President.

R. F. HUDSON, Secretary and Treasurer.

W. SIMPKIN, Vice-President and Gen. Agent.

THE RICHMOND ICE-MACHINE CO.

Manufacturers of the Most Improved

RICHMOND, VA.

Ice-Making and Refrigerating Machinery

ON THE COMPRESSION PLAN.

We guarantee the proper working of our machinery. All working parts built to gauge, so they can be readily duplicated, and nothing but the very best material used. Specifications and estimates furnished. Correspondence solicited.

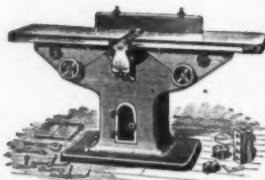
P. O. Box 315.

GENERAL OFFICE 1105 MAIN STREET, RICHMOND, VA.

Send for our Pamphlet "How to Make an Ice Factory Pay."

CORDESMAN, MEYER & CO.

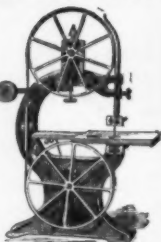
171 & 173 W. SECOND STREET, CINCINNATI, OHIO.

**Wood-Working Machinery**

OF EVERY DESCRIPTION.

Planing Mills, Furniture and Chair Factories, Carriage, Wagon and Agricultural Works.

Write for our latest catalogue and price-list. Correspondence solicited.

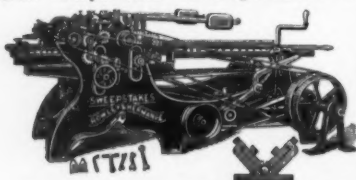


UNIVERSAL WOOD-WORKER.

NO. 2 BAND SAW.

Our Improved Sweepstakes PLANER, Moulder and Moulder

Is Simple, Strong and Durable. Never falls in Yellow Pine or Hard Lumber.



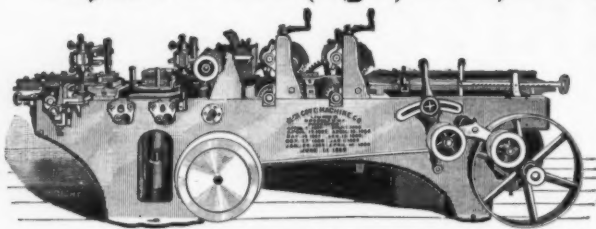
Recent improvements make it the most complete Planer, Moulder and Moulder in the market for the money, which is attested by daily testimonials. No other Planer and Moulder made that uses the Ellis Patent Three-Part Journal boxes. It has an extra Head and Arbor for making Mouldings and all odd work. Two Belts drive the Top Cylinder. All Cutter Heads are made of Cast Steel. All Expansion Links and Gears are BUSHED with BRASS. It has a POWERFUL FEED. Heavy countershaft furnished with each machine. Write for special prices; also for our 80-page catalogue, showing a full line of Sash, Door, Blind and Furniture Factory Machinery made by us. Address

ROWLEY & HERMANCE, Williamsport, Pa. U. S. A.

Price: { To plane with top head 24" wide, under head 20" wide & match 12 1/2" wide, wt. 3,500 lbs. \$530
 " " " 24" " " and match 12 1/2" wide, weight 3,000 lbs. \$410
 " " " 20" " " " 3 1/2" " " 2,500 lbs. \$380

GLEN COVE MACHINE COMPANY, Limited,

MANUFACTURERS OF

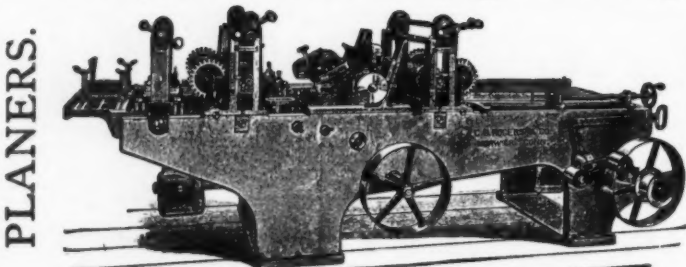
Improved Planing Mill Machinery.Office & Works,
34 CLAY ST.
Brooklyn N. Y.

No. 24.—10-inch Patented Fast Feed Moulding Machine.

SPECIALTIES: Fast-Feed Sizing, Planing and Matching, Flooring and Ceiling, Inside Moulding and Double Surfacing Machines; also the celebrated GLEN COVE DOUBLE DECKER and GLEN COVE SPECIAL.

C. B. ROGERS & CO.

MAKERS OF Improved Wood-Working Machinery.

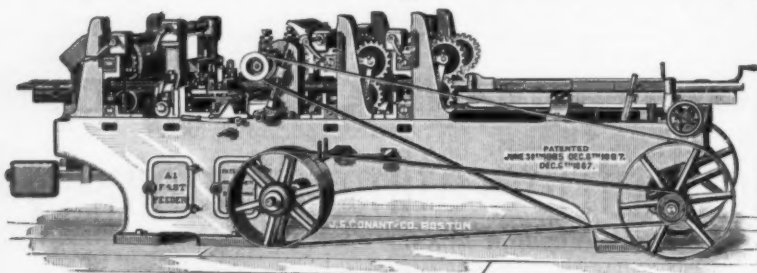


MORTISERS, TENONERS, BAND AND SCROLL SAWS, &c.

Office and Works, Norwich, Conn.

Wareroom, 109 Liberty Street, N. Y.

THOS. K. CAREY & BROS., AGENTS, BALTIMORE, MD.

S. A. WOODS MACHINE CO.
Wood-Working Machinery,

Planing and Moulding Machines a Specialty.

91 Liberty Street, NEW YORK. 172 High Street, BOSTON. 61 S. Canal Street, CHICAGO.

WORKS: SOUTH BOSTON, MASS.

WEST POINT BOILER WORKSBoilers with our Patent Eclipsing Manhole and Plate in each, And all kinds of Sheet Iron Work made to Order.
R. MUNROE & SON
23rd & Smallman Sts., Pittsburgh, Pa.**Stow Flexible Shaft Co., Limited,**

2220 Pennsylvania Ave.

PHILA., PA.

Manufacturers of

FLEXIBLE SHAFTS,

And ALL KINDS OF MACHINES TO BE USED WITH THEM.

Portable Drilling, Tapping, Reaming and Boring Machines. Also

Portable Tools for Emery Wheel Grinding, Metal and Wood Polishing,

Cattle Brushing and Clipping, &c.

Builders of Special

Machines

FOR

Railroads, Bridge

& Boiler Makers,

Contractors, &c.

**WM. E. HILL & CO.**

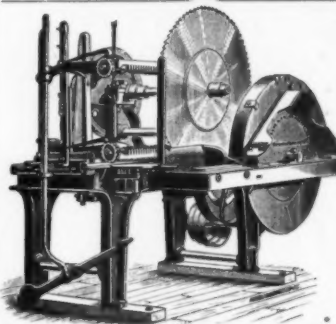
— MANUFACTURERS OF —

SPECIAL PATENT SAW and SHINGLE MILL

MACHINERY

KALAMAZOO, MICH.

WRITE FOR NEW ILLUSTRATED CATALOGUE.

**WOOD-WORKING MACHINERY**

28-in. Band Saw \$65. 30-in. Band Saw \$85. 38-in. Band Saw \$105. Planer Plane, 24x9, \$108. Planer Plane, 18x6, \$82. 24-in. Double Surfer \$260. Jig Saw with six Saws \$82. Saw Bench with one 20 and two 14-in. Saws \$65. 12-in. Buzz Planer \$85.

Other Machinery in proportion. Largest line in the United States. Special Cash Discounts from the above to the Southern trade and prices given. Freight paid to any railroad station in the U. S. or Canada. Write us for Circulars, Prices and Terms before buying.

G. H. SCANLAN & CO.

96 & 98 Preble St., Portland, Me.

SAWING MACHINERY

BEACH'S PATENT SCROLL SAWING

Machines. More than 5,000 in use.

You can stop, change the saw and get to work in 4 seconds.

ALSO Steel Saw Arbors, Slitting Saw Tables, Com-

bination Saw Benches, Combined Rip and

Out-off Saws. The Best Double and Single

Out-off Saws Made on Earth. Com-

bined Square and Bevel Saw Gauges.

You can't afford to buy any other. Send for catalogue and prices. Address (naming street)

H. L. BEACH, 110 Rose Street, Montrose, Pa.

MACHINE SHOP AND BLACKSMITH EQUIPMENTS

A SPECIALTY.

Engine Lathes, Chucks, Drill Presses, Shaping Machines, Power Hammers, Bolt and Nut Machinery, Portable Forges, &c. Pressure Blowers and Emery Grinding Machinery. Send for Catalogue of Machine Tools, stating exactly what is required, so that prices may be quoted. Delivered your station if so desired.

W. E. DREW, Agent,**S. C. FORSAITH MACHINE CO.** Machinists and General Manchester, N. H.

The **CANTON SAW CO** MANUFACTURERS OF

SOLID AND INSERTED TOOTH CIRCULAR SAWS

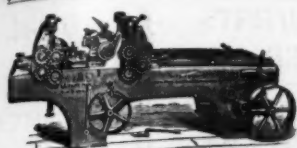
KNIGHT'S IMPROVED MILL DOGS

Shingle (concave & grooving) Heading and other Saws. OVER 15,000 in use in the United States and Canada.

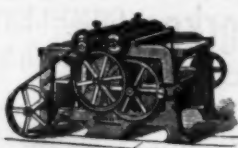
125-137 SOUTH REX ST. Canton, O. U.S.A. SEND FOR DESCRIPTIVE CIRCULAR AND PRICE LIST.

PETER GERLACH & COMPANY, CLEVELAND, OHIO.Manufacturers of **Alligator Chisel-Bit Saws,**

The CHAMPION STAVE, HEADING and SHINGLE MACHINES. Ice Tools and Mill Supplies.



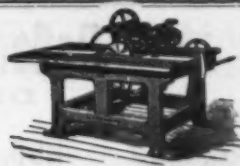
No. 2—Pacific Planer and Matcher.



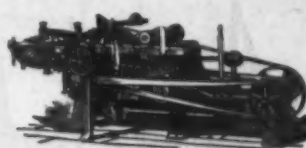
No. 4—Smoothing Planer.



Horizontal Borer.



No. 2—Self-Feed Rip Saw.



No. 3—Molding Machine.

No. 2
Foot Scroll Saw.

W. H. DOANE, Pres't.

J. A. FAY & CO.

D. L. LYON, Sec'y.

CINCINNATI, OHIO.

Manufacturers of
—PATENT—**Improved Wood-Working Machinery**

OF EVERY DESCRIPTION,

For Planing Mills, Sash, Door and Blind Shops, Furniture, Carriage and Wagon Factories,
Spoke, Wheel and Agricultural Works, Car Shops, etc.No. 3
Band Saw.

Awarded "GRAND PRIX" at the Great PARIS EXPOSITION of 1889.

Every Machine Tested and Warranted.
Send for Circulars and Estimates.

Wood Working Machinery



COMPLETE OUTFITS FOR PLANING MILLS

H. B. SMITH MACHINE CO.Send for catalogue and visit our extensive
warerooms if possible.**925 MARKET STREET.****PHILADA. PA., U. S. A.**

Established 1840.

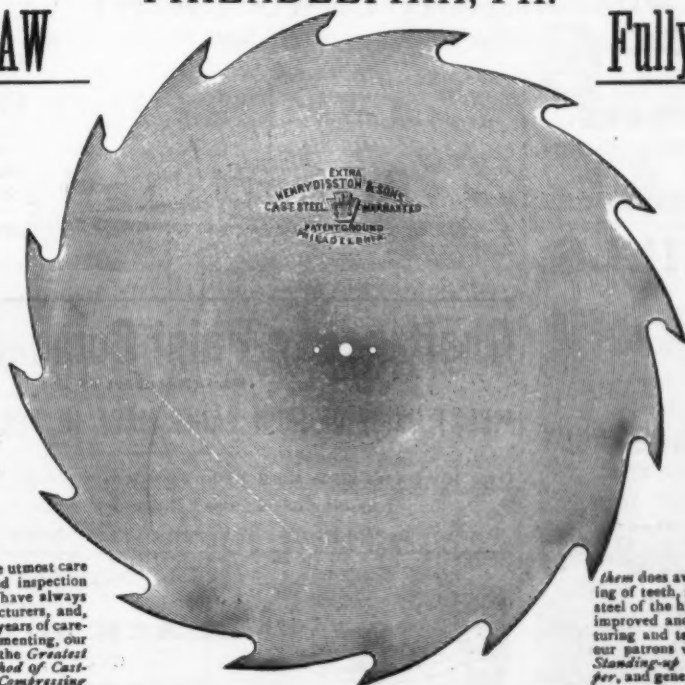
HENRY DISSTON & SONS,

Established 1840.

Incorporated,

Keystone Saw, Tool, Steel and File Works,

PHILADELPHIA, PA.

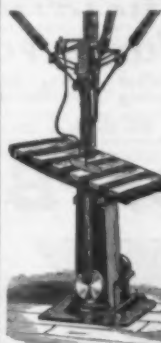
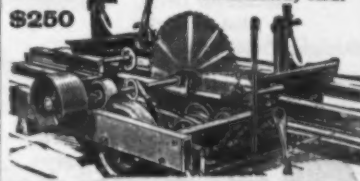
Every SAW**Fully Warranted.**BRANCH HOUSE:
Cor. Randolph and Market Streets,
CHICAGO, ILL.Send for Price List and Discount Sheet and
New Illustrated Edition of Files.BRANCH HOUSE:
923 West Main Street,
LOUISVILLE, KY.Send for New edition of Lumberman's Hand
Book and Sawyer's Pocket Edition.WE have always taken the utmost care
in the manufacture and inspection
of our steel and saws, have always
headed the list of saw manufacturers, and,
we are happy to say, that after years of care-
ful study and expensive experimenting, our
efforts have been crowned with the *Greatest
Success of the Age, as our Method of Cast-
ing Steel Ingots and Process of Compressing*them does away with the splitting and spall-
ing of teeth, makes a hard, tough and elastic
steel of the highest quality, which, with our
improved and patented process of manufac-
turing and tempering enables us to furnish
our patrons with saws that for *Toughness,
Standing-up Quality, Uniformity of Tem-
per, and general superiority,***HAVE NEVER BEEN EQUALLED.**

THE BEST MILL BUILT.

Send for circular.

\$200

\$250

Richmond Machine Works
Richmond, Ind.

JIG SAW.



CORNER BLOCK MACHINE.

P. PRYIBIL,

518 to 524 W. 41st Street, New York City.

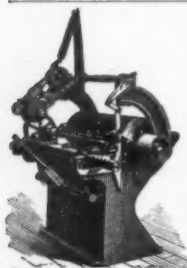
MANUFACTURER OF SUPERIOR

Wood-Working + Machinery,

Shafting, Pulleys and Hangers.

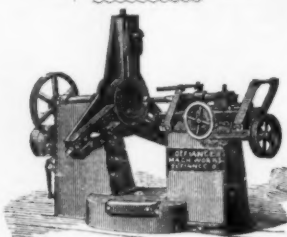
Send for Catalogue "A."





Patent Automatic Combined Spoke, Turning and Squaring Machine for common, seven patent or sharp-edged spoke turning; capacity 2,500 per day

Established 1850.



Wheel-Boxing Machine.

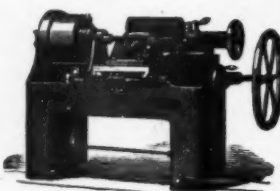
Defiance Machine Works, DEFIANCE, OHIO.

MANUFACTURERS OF

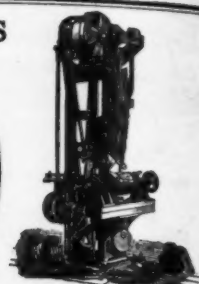
HUB, SPOKE, WHEEL, BENDING
Wagon and Carriage Machinery.

Patent Plow-Handle Benders, Shapers, Cut-off Saw and Revolving Polishers, Hot-Form, Double and Single Bent Pole and Express Shaft Benders, Neck-Yoke, Singletree, Brush Handle Lathes and Finishing Machines. Estimates and Circulars given upon application.

COMPLETE OUTFITS
FURNISHED.



Patent Hub-Turning Machine.

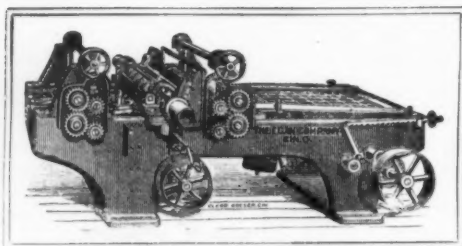


Patent Automatic Double-Chisel Hub-Mortising Machine. Built in three sizes.

**FOR FAULTLESS.
FAITHFUL,
FAST FEEDING**

WOOD WORKING MACHINERY

OF EVERY DESCRIPTION.



Send for New Catalogue and Information.

Address

THE EGAN COMPANY,

Complete Outfits

For Planing Mills, Sash,
Door, Blind, Chair, Furni-
ture, Carriage and Wagon
Factories, General Wood
Workers, &c.

228 to 248 W. Front St., Cincinnati, O.

Latest Expression of American Ingenuity.

Established 1853.

Wheeler, Madden & Clemson Mfg. Co., Middletown, N.Y.

Manufacturers of Hand, Cross-Cut and Wood

No. 24 Hand, Panel and Rip Saws—26-inch, list \$30.00 per dozen.



PRICE, QUALITY and general SUPERIORITY taken into consideration, this is the Best Hand Saw on the market for Mechanics use.

SAWS.

Extra Thin Back. Patent Handle. Hollow Back Blade.

PERFECT TEMPER. ELEGANT FINISH. SUPERIOR FILING.

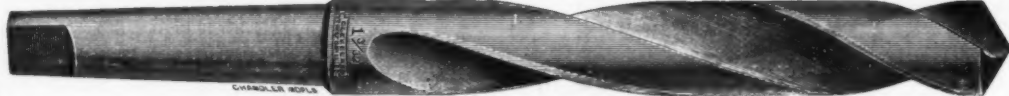
CROSS-CUTS furnished in all the leading shapes, sizes and styles of teeth, in both WIDE, NARROW and ONE MAN Saws. Only the very best of Crucible Steel of our own manufacture enters into our goods, and we fully warrant them in each and every particular. We are now turning out the finest goods ever produced in our line. For Sale by all Leading Jobbers and Dealers.

Established 1874.

MANUFACTURERS OF

Taper Shank Drills,
Straight Shank Drills,
Blacksmith Drills,
Bitstock Drills,
Straight Fluted Drills,
Machine Bit Drills

Cleveland Twist Drill Co.



Send for Catalogue.

OFFICES—

Cor. of Lake & Kirtland Sts., Cleveland, O.
101 Chambers Street, New York.

Write for Discounts.

MANUFACTURERS OF

Self-feeding Reamers,
Expanding Reamers,
Shell Reamers,
Stay-bolt Taps,
Taper Reamers

ESTABLISHED 1847.
BALTIMORE MILL FURNISHING WORKS.

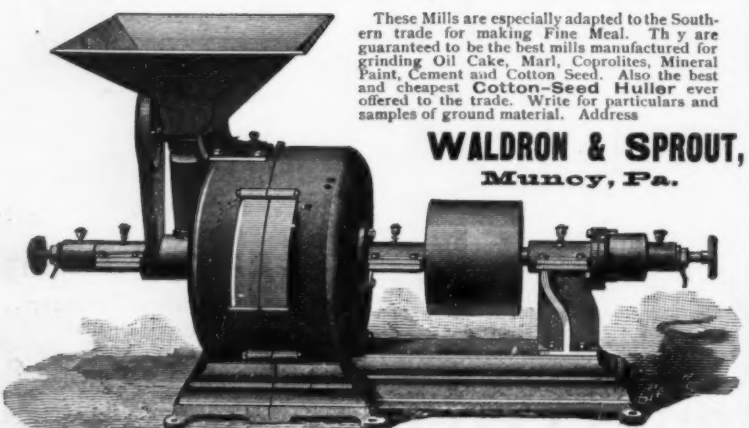
B. F. STARR & CO.
BALTIMORE, MD.

MANUFACTURERS OF
BURR STONES FOR ALL PURPOSES.

Portable Mills, Roller Mills, Smut Machines, Shafting, Pulleys,
Gearing and General Mill Machinery.

Importers of Bolting Cloths and General Mill Furnishers.
The Leading Mill Furnishing House on the Atlantic Seaboard.

FRENCH BURR MILLS,



These Mills are especially adapted to the Southern trade for making Fine Meal. They are guaranteed to be the best mills manufactured for grinding Oil Cake, Meal, Coprolites, Mineral Paint, Cement and Cotton Seed. Also the best and cheapest Cotton-Seed Huller ever offered to the trade. Write for particulars and samples of ground material. Address

WALDRON & SPROUT,
Muncy, Pa.

Manufacturers of French Burr Mills, Flour Bolts, Corn Meal Sieves, Wheat
Sourers and Cleaners, Corn Ear Crushers, &c.

IRON CLAD PAINT CO., Cleveland, O.

Factory, 75 & 77 Central Way. JAMES WADE, Sec. & Treas., 3 Case Bldg.

ORDER DIRECT FROM THE

Iron Clad Paint Co.

And get the genuine article, and save liability of suit for using an article made in violation of the patents issued to Wm. Green, and now owned by this Company.

IRON-CLAD PAINT is the most durable, most fire-proof and cheapest Paint made.

FURNISHED both Dry and Ground in Oil.

USED BY NEARLY ALL THE RAILROADS.



Trade Mark Patented Paint Co. Entd.

Chattanooga Paint Company, CHATTANOOGA, TENN.

Manufacturers of the

“BEST OXIDE OF IRON PAINT MADE IN THE UNITED STATES.”

Over 18,000 tons made since 1880. 3,000 tons made in 1888. Over 500 certificates regarding its qualities. Either dry or mixed ready for use.

SEND FOR PRICES DELIVERED AT POINT OF DESTINATION

R. M. WHITNEY,

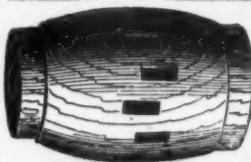
MANUFACTURER OF

BLACK BIRCH HUBS.

OLEAN, N. Y., U. S. A.

These Hubs are made in sizes from 6x8 to 16x18 inches, and are especially adapted to dry climates.

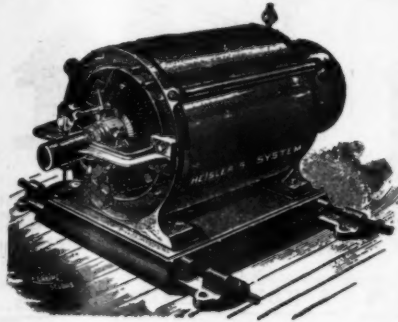
Send for Circular and Prices.



Subscribe to the *Manufacturers' Record*.

THE HEISLER PATENT Long Distance Incandescent Electric Light System.

UNEQUALLED FOR DISTRIBUTION OVER WIDE AREAS.



SPECIALY ADAPTED FOR STREET, COMMERCIAL & DOMESTIC ILLUMINATION FROM CENTRAL STATIONS.

Plant may be located where power can be secured cheapest, even if miles distant from the lighting. Safety, Reliability, and Financial Success fully demonstrated. Plan of Wiring the Simplest, Cheapest and most Efficient. Strictly Series. Noted for the Brilliance and Beauty of the Light. Lamps, 10 to 100 Candle Power; Long Life without Blackening. Dynamo Self-contained and perfectly Automatic.

Heisler Electric Light Company,

809 to 817 South Seventh Street, ST. LOUIS, MO.

"Awarded the Highest Distinction—a Gold Medal—by the International Jury at the Universal Exposition, Paris, 1889."

Send for Circulars.

Correspondence Solicited.

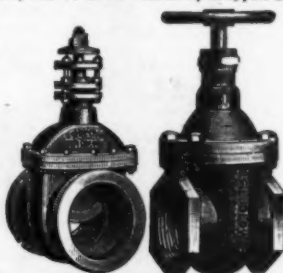
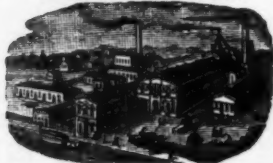
LUDLOW VALVE MFG. CO.

Office and Works: 938 to 954 River St., and 67 to 83 Vail Ave., Troy, N. Y.

VALVES

Double and Single Gate, 1/4 inch to 48 inch.; outside and inside Screws, Indicators, etc., for Gas, Water, Steam, Oil.

SEND FOR CIRCULAR.



Also Fire Hydrants. Yard and Wash Hydrants. Check and Foot Valves.

The New Industrial Light "Lucigen"

BRILLIANT, POWERFUL AND DIFFUSIVE.

Burns Petroleum Oil Sprayed by Compressed Air.

SIMPLE, SAFE AND ECONOMICAL.

Thousands in use in Iron Works, Machine Shops, Railroad Yards, etc. etc., in Europe and in the United States.

Lamps and Burners from 200 to 10,000 Candle Power.

MANUFACTURED BY THE

INDUSTRIAL LIGHT COMPANY,
196 Temple Court, New York City.

AUTHORIZED REPRESENTATIVES—Rand Drill Company, New York City; Buffalo Engineering Co., 226 Pearl Street, Buffalo, N. Y.; W. H. Carruthers & Co., Chamber of Commerce Building, St. Louis, Mo.; Joseph Parks, Bay View, Milwaukee, Wis.; Isaac Reynolds, 3 Euclid Avenue, Cleveland, Ohio; Parvin & Co., 133 S. Fourth Street, Philadelphia, Pa.



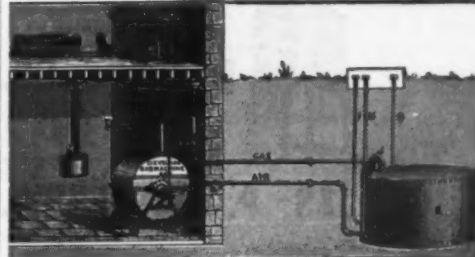
The CLEVELAND GAS MACHINE CO.

176 CENTRAL WAY,
CLEVELAND, O.

MANUFACTURERS OF
Improved Gas Machines

For Illuminating and Heating

purposes. Especially adapted for Canning Factories, Mills, Churches and Stores; Country and Suburban Residences requiring from 20 to 1,000 lights; also Gas-Soldering and Metal-Heating Outfits and Special Machines for Meat-Packing Establishments. Correspondence solicited. Send for illustrated circular.



SAVE GAS. REDUCE BILLS AND SECURE BETTER LIGHT.

The American Gas Saving Co's Gas Controller.

Over 200,000 in use. Saves from 15 to 50 per cent. according to pressure in mains.

Adopted by U. S. Government after competitive tests; New York Elevated Railroad (saving \$11,519.37 in five months, over \$100,000.00 in five years). In use in thousands of Mills, Factories, Hotels, Depots, Public Buildings and Private Houses. Send for descriptive circular and testimonials. Find size of meter on brass plate in front with maker's name.

Full directions for attachment and testing sent with each. Controllers sent for trial on receipt of price, and money refunded, less express charges, if unsatisfactory and controllers returned in good order. All orders C. O. D. Agents wanted.

AMERICAN GAS SAVING CO., - - - 35 Broadway, N. Y.



THE "WELLS LIGHT."

WALLWORK & WELLS' PATENTS. (Registered Title.)

Powerful Portable Light ^{UP} TO 2,000 C. P.

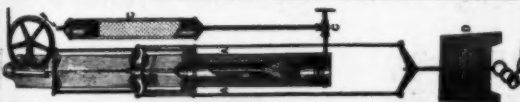
Self Contained. No Outside Motive Used. Complete in Itself, as shown by Accompanying Cut. Simple in Construction. Any Laborer can handle it.

3,000 SOLD LAST SEASON.

UNAFFECTED BY WEATHER.

FOR FULL INFORMATION
APPLY TO

KEEGAN & HALPIN, 44 & 46 Washington St.,
NEW YORK.



Without any question the
Greatest
FUEL SAVER
of any Regulator.

Hallock Damper Regulator.

UPWARDS OF 2,000 NOW IN USE.

Keeps a steady pressure of steam. Saves fuel and gives regularity of power. Simple in construction. It does not get out of order. Uses no water. Requires no tank. Will outlive any boiler.

AUSTIN ADAMS, Sole Agent. 40 Dey Street, New York.

Regulator can be taken apart, cleaned and put together in five minutes

The Greatest Compliment

Which our competitors pay us is to represent their products "just as good as BONNELL'S NUBIAN IRON ENAMELS." We compare with no one, we are sui generis, that means we make the best black varnish for iron in the United States; all grades from cheap agricultural dipping to the best bicycle enamel made. We are the standard on goods for Ice Machinery. Write us and get bottom prices.

THE NUBIAN IRON ENAMEL CO.

163 Sangamon Street, CHICAGO.

77 Warren Street, NEW YORK.

PERFECTION STOVE PIPE.



THE only nested Pipe that is absolutely complete and ready for use without using tool or rivets.

Cannot collapse or spread, thus insuring a perfect fit. Twenty-five joints in a small crate.

Manufactured by

DETROIT ELBOW CO.

Detroit, Mich., and St. Louis, Mo.

TRADE NOTES.

THE furnaces of the Vanderbilt Steel & Iron Co., Birmingham, will be lighted by apparatus of the Easton Electric Co., of New York, purchased through the Southern agent, W. A. Wright, Birmingham.

A NEAT little case, by which postage stamps can be carried in the pocket-book in hot weather without sticking together, has been issued by the Mason Regulator Co. of Boston, and will be sent free to any address upon receipt of stamp.

AN unusual opportunity for investment in a manufacturing enterprise in Northern Georgia is offered in our advertising columns by M. H. V. Jones, of Emerson, Ga., or by Wess & Salvage, 817 Broad street, Chattanooga. Small capital is required, and a monopoly in this line of goods is to be had.

THE J. B. Alfree Co., of Indianapolis, will soon place on the market their new Keystone corn mill. They claim that this mill is adapted for the Southern trade especially, for grinding fine cornmeal. It is constructed very strong; size of mill 7x8, and it will grind from 25 to 35 bushels of fine meal per hour, or 35 to 50 bushels of feed per hour.

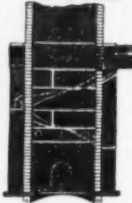
THE Terry Manufacturing Co., of Nashville, Tenn., manufacturers of desks, bank and office furnishings, outfits for jewelers, druggists and grocers, makers of mantels, artistic interior woodwork, etc., have recently increased their capital stock from \$35,000 to \$60,000. They report that they need a superintendent of the practical business department, and would allow the right man to take part of the new capital stock.

STOCK in two novel machines manufactured by the Union Manufacturing Co., 620 Atlantic avenue, Boston, is now offered for sale, with promises of large dividends. One is a device for testing the pulling strength of the finger. Drop a penny in the slot and it works. It is a reductive contribution box. The other is a cigar cutter and lighter, in which advertisements are inserted. A new advertisement jumps into place at the cutting of each cigar.

THE National Pulley Covering Co., of Baltimore, have recently received the following communication in regard to their well-known patent friction covering for pulleys from the Embossing Co., Albany, N. Y.: "We have been using your pulley covering for about two years and find it almost indispensable in our factory. One of the greatest advantages is its remarkable quality of keeping the belts free from dust which formerly collected on them with uncovered iron pulleys. We have several places where the belt troubled us in slipping, and have found it a perfect cure in every case. We heartily recommend it as a meritorious article."

THE Blakeslee Manufacturing Co., Du Quoin, Ill., report the following among recent shipments: Steam pumps to St. Louis, Mo., Harrisburg, Ill., Chicago, Ill., Chandlerville, Ill., Seattle, Wash., Little Rock, Ark., Bardwell, Ky., Omaha, N. b., Cairo, Ill., Rockdale, Texas, Grand Rapids, Mich., Leavenworth, Kansas, J. t Pamps to New Orleans, La., Richmond, Va., Philadelphia, Pa., Kansas City, Mo., Cairo, Ill., St. Louis, Mo., Indianapolis, Ind., Cincinnati, O., Monroe, La., Omaha, Neb., Jacksonville, Fla., Des Moines, Iowa, Denver, Col., Chicago, Ill., Erie, Pa., Tyles, Texas, Port Huron, Mich., Decatur, Ill., Memphis, Tenn., Toledo, Ohio, Pump and boiler to Merrouge, La. Boiler to De Land, Fla.

"THE COLLIAU"



NEW AND IMPROVED
HOT BLAST CUPOLA,
(patent March, 1884), and New
Smokeless and Automatic Feed
Boiler (pat. 1886, in U. S.).
Correspondence solicited for
plans of foundries and the eco-
nomical working of cupolas, the
saving of fuel in melting iron
and steel, and in the production
of steam. Address VICTOR
COLLIAU, Mechanical Engi-
neer and Architect, 287 Jeff-
erson Avenue, Detroit, Mich.

The COLLIAU
PATENT
Cupola Furnace.

Adapted to all Foundries,
The Most Economical,
The Lowest in Price.

MANUFACTURED EXCLUSIVELY BY
BYRAM & CO.
DETROIT, MICH.

JAS. P. WITHEROW.

ENGINEER & CONTRACTOR,
Furnace & Steel
Plant Construction.
PITTSBURGH, U. S. A.

Blast Furnaces and Steel Works designed
and erected complete in every detail ready
for operation. Special attention given to
the manufacture of

* HEINE *
Safety Water Tube Boilers.

Owning an extensive manufacturing plant,
I can guarantee promptness in execution,
and satisfaction in any contracts under-
taken by me.

FOR THE BEST
MACHINERY
For Shingles, Heading and Staves,
VENEER CUTTERS
AND
IMPROVED
Gauge Lathes

FOR
TURNING
HANDLES, ETC.
Address

Trevor Mfg. Co. { Successors to } LOCKPORT,
TREVOR & CO. N. Y.

Batts Patent Differential Hoist.

MANUFACTURED BY THE
Boston & Lockport Block Co.



162 Commercial St.
BOSTON.

The chief merits of
this hoist that we wish
to bring to the public
notice is that it only
requires

ONE MAN TO
Hoist the Load.

It is also far more
compact, taking up less
room than any other
make, and will hold the
load at any point.

Send for circular and
prices.
Every hoist warranted.

THE IMPROVED LANCASTER

Turbine Wheel.

Write for Descriptive
Catalogue.



Lancaster Turbine Wheel Co. Lancaster, Pa.

Rome Foundry & Machine Works,
ROME, GA.

Manufacturers of the well known

DAVIS DOUBLE TURBINE

Water Wheel



Beyond all question
one of the best
Wheels on the
market, and is
fully guaranteed.

Send for Illustrated
Catalogue and Price List.

ALSO MANUFACTURE
Portab'e & Stationary Engines
AND BOILERS.

Grist and Flouring Mill Machinery.

**PENNSYLVANIA GLOBE
GAS LIGHT CO.**
IMPROVED ROYAL
ELKINS GAS MACHINE
THE BEST IN THE
MARKET
115 BROADWAY
NEW YORK
195 MICHIGAN ST.
CHICAGO
CONTRACTORS FOR LIGHTING CITIES
AND TOWNS WITH THEIR RENOWNED SYSTEM OF
SELF-GENERATING GAS LAMPS OVER 50 YEARS IN USE

**H. W. JOHNS' ASBESTOS
LIQUID PAINT**

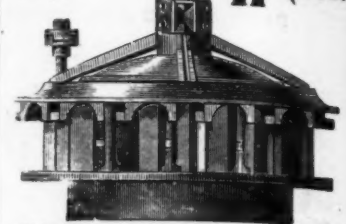
ARE the STANDARD PAINTS for STRUCTURAL
PURPOSES, and are composed of pure
linseed oil and the highest grade of pig-
ments. They are prepared ready for use,
in newest shades and standard colors, and,
on account of their purity and great cover-
ing properties, they are the MOST DURABLE
and ECONOMICAL Paints ever produced.
One gallon will cover from 250 to 275
square feet, two coats.

Samples and Descriptive Price List free by mail.
H. W. JOHNS MANUFACTURING COMPANY.

SOLE MANUFACTURERS OF
H. W. Johns' Asbestos Roofing,
Fire-Proof Paints, Building Felt,
Steam Pipe and Boiler Coverings,
Asbestos Steam Packings, Gaskets, etc.
Vulcanized Moulded Rings, Washers, etc.
87 MAIDEN LANE, NEW YORK.

SUCCESS

Water Wheel.



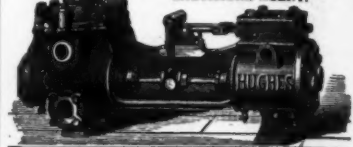
This Wheel is strong and durable. Excelled
all other wheels in the great trial tests. Is in use
all over the nation. I also make a specialty of
HEAVY GEARING & MACHINERY

For Paper, Cotton and Grist Mills.

S. MORGAN SMITH, York, Pa.

IMPROVED TURBINE
WATER WHEELS.
ALCOTT
MOUNT HOLLY, N. J.HUGHES STEAM PUMP CO.
CLEVELAND, O.

MANUFACTURERS OF
Single, Duplex and Compound Pumps
FOR ALL DUTIES.
WATER WORKS PUMPING ENGINE
SEND FOR CATALOGUES AND PRICES LIST.
Danagan & Swift, New York Agents.
T. R. WHOROV, 324 NORTH ST.
BALTIMORE AGENT.

DON'T
BUY AN
ENGINE
OR
BOILER

Until you have seen our circulars. Engines complete
from 5 to 110 horse power, both Vertical and Hor-
izontal, at prices below those of other reputable mak-
ers. 1800 in use. Boilers of every style. Auto-
matic Engines for Electric Lights. Centrifugal
Pumping Machinery for Drainage or Irrigation.
Established 25 years. Perfect satisfaction guaran-
teed. Ask for Circular M and address

Morris Machine Works,
BALDWINVILLE, N. Y.HARTMAN'S PATENT INSIDE
SLIDING WINDOW BLIND

Is the most popular Blind in America. Ar-
chitects and builders prefer it to any other
for merit, style, convenience and econ-
omy. Not complicated. The only blind
that is furnished with an automatic Bur-
lar Proof Lock, free of charge. This
item of immense magnitude, and may save
you many times the cost of blinds and per-
haps life also, and the only blind that gives
entire satisfaction. Thousands in use.
Agents wanted everywhere. Send for illu-
strated catalogue and prices. Manufactured by
HARTMAN & DURSTINE,
No. 5 Beaver St., WOOSTER, OHIO.

WILLER'S
SLIDING BLINDS
SUPERIOR TO ALL OTHERS.

Agents Wanted
Everywhere

AWARDED
THE
HIGHEST PRIZE
AT THE
CINCINNATI
CENTENNIAL
EXPOSITION.

USED BY
LEADING
ARCHITECTS
STATE YOUR BUSINESS
WHEN WRITING
FOR
CATALOGUE
OR
AGENCY.

WILLIAM WILLER
SOLE MANUFACTURER—FOURTH & CEDAR STS.
MILWAUKEE, WIS.

KIMBALL.

Marion County, Tennessee.

A Gigantic Enterprise Inaugurated.

CAPITAL, - £1,000,000. DEVELOPMENT FUND IN CASH, - - \$2,000,000.

GUARANTY FUND " - - 500,000.

KIMBALL TOWN COMPANY.

H. I. KIMBALL,

Vice-Prest. & Managing Director.

DIRECTORS.

HON. LOGAN H. ROOTS, President of First National Bank, Little Rock.
CHARLES P. RICHARDSON, Capitalist, Chattanooga.
J. R. STEVENS, President First National Bank, Huntsville, Ala.
A. J. MORISON, Capitalist, London, England.
J. H. BRYANT, President Seattle Coal & Iron Co., New York.
GEO. COOK, President Hallet & Davis Piano Co., Boston, Mass.

HON. H. L. COCHRAN, Judge Probate Court, Fort Payne, Ala.
H. I. KIMBALL, Atlanta, Ga.

OFFICERS.

President, HON. LOGAN H. ROOTS.
Vice-President, C. P. RICHARDSON.
Second Vice-President and Managing Director, H. I. KIMBALL.
Treasurer, J. H. BRYANT.
Assistant Treasurer, ED. E. RICHARDSON.
Secretary, W. E. DONALDSON.
Assistant Secretary, W. BROOKS COVELL.

ATTORNEYS.

W. E. DONALDSON, Kimball.
SHEPHERD, WATKINS & BATES, Chattanooga.

ENGINEERS.

Landscape Engineer, NATHAN G. BARPET.
Resident Engineer, W. J. KELLY.
Sewerage and Electrical Engineers, NIER, HARTFORD & MITCHELL.
Hon. SAM'L H. DUCK, Gen. Superintendent.
OFFICES.
Richardson Building, Chattanooga.
Union Trust Building, 80 Broadway, New York.
Company's Building, Kimball, Tenn.

The Entire Executive Management

has been entrusted to HON. LOGAN H. ROOTS, of Little Rock, Ark., President; C. P. RICHARDSON, Chattanooga, Vice-President, and H. I. KIMBALL, late of Atlanta, Second Vice-President and Managing Director.

Real Estate, 64,000 Acres,

With a frontage of three miles on the navigable waters of the Tennessee River. 550,000,000 tons Red Fossiliferous and Brown Hematite Ores.

Six workable veins of Coking Coal, estimated at 800,000,000 tons, containing 74 per cent. of fixed carbon.

Hardwood Forests, said by experts to contain 817,950,000 feet of merchantable lumber.

Numerous Mill and Factory Sites, with an immense aggregate water-power.

Springs of Pure Freestone Water on the mountain side three to six hundred feet above the city, sufficient to supply a population of 100,000.

Climate mild, uniform and salubrious in the lovely Sequachee Valley, 740 feet above the sea level.

Transportation by the Tennessee River, by the Nashville, Chattanooga & St. Louis Railroad and, in the immediate future by the East Tennessee, Virginia & Georgia System.

Kimball Offers

Solid, practical inducements to manufacturers. First-class enterprises under good management will be guaranteed, one-half the cash required. Local taxes will be remitted for a term of years. Lowest freights and cheapest raw materials will be secured.

Auxiliary Companies

will be organized by the parent corporation for developing the wealth of the Sequachee Valley and for supplying the city with heat, light, water, power and transportation.

A Mammoth Industrial Building

will be erected by the Kimball Town Company, which will have power, light and heat, that will be supplied to manufacturers on the most liberal terms.

For Religion and Education.

At all sales of lots in Kimball by the corporation, ten per cent. of the gross proceeds will be set apart for religious and secular educational purposes, one-half to each. Every person buying one or more lots will be permitted at the time of purchase to state to what church or denomination in Kimball he prefers that five per cent. of his purchase money shall be appropriated. The other five per cent. will go into a fund for educational purposes, the first object being the establishment and maintenance of a scientific school.

Look Out For

CAMBRIA.

The
dou
the
F
mac
duri
track
the
met
pany
Si
great
when
been
been
manu
if, aft
chine
they w
incurr
sold, l
There
track
machin
requisi
cheap
than a
been in
The
tramwa
a track
ties pla

Rails are
those to
three or
form car
cross ties
each car
the tram
rails are

The Harris Track-laying Machine.

One of the most remarkable labor-saving machines used in railroading is the Harris track-laying machine illustrated herewith.

Fig. 1 shows the pioneer car with the tram track and the automatic tie car ready to be run out on the extension and dumped.

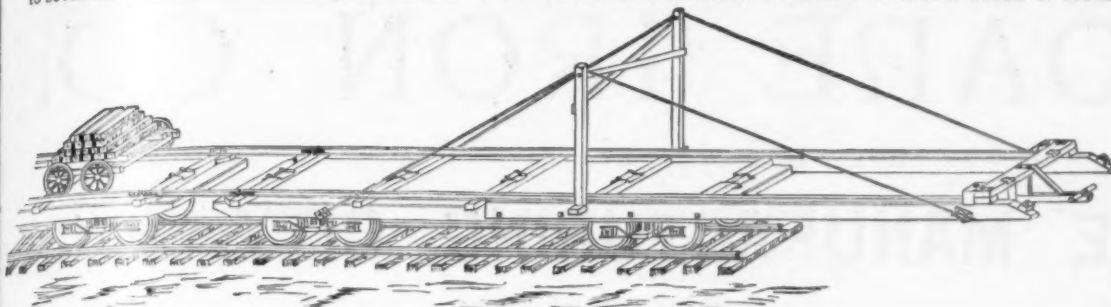


FIG. 1.—THE HARRIS TRACK-LAYING MACHINE.

The rollers for carrying the rails and the double roller suspended from the end of the extension timbers are also shown.

Fig. 2 shows the machine at work. The machine has been in use for eight years, during which time about 6,000 miles of track have been laid with it in all parts of the United States and Canada, and it has met with commendation from every company or contractor who has used it.

Since the system was first introduced great improvements have been made in it, whereby the speed of laying track has been greatly increased, while the cost has been correspondingly diminished. The manufacturers guarantee satisfaction, and if, after ten miles have been laid, the machine does not give perfect satisfaction, they will take it back and pay all expenses incurred in fitting up. The machine is not sold, but leased on royalty by the mile. Therefore, there is no expense except for track actually laid. It is claimed for the machine that it combines the three vital requisites of railroad track-laying—speed, cheapness and utility—to a greater degree than any other method which has ever been in use.

The invention consists of a continuous tramway or track laid the whole length of a track-laying construction train upon cross ties placed upon the top of platform cars.

connecting the permanent rails, which have a peculiar joint fastening to permit of their easy removal after the train has been unloaded, and their ready replacement again when the next train comes to the front.

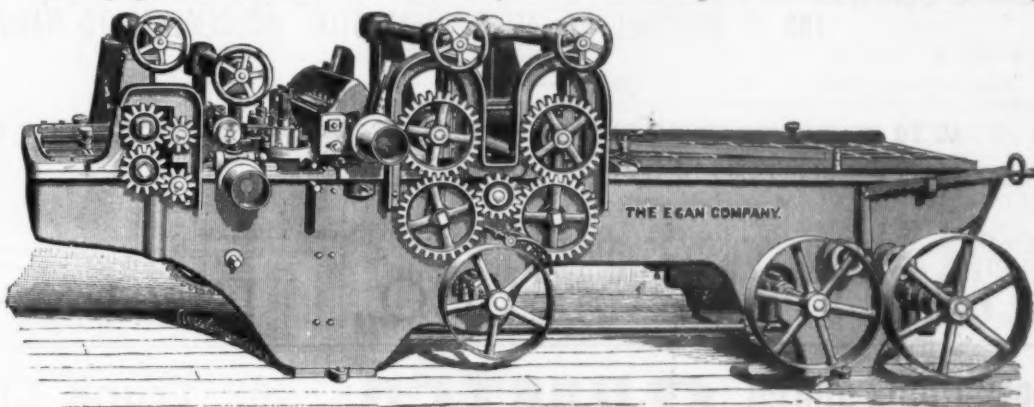
To further facilitate track-laying, a frame work, upon which to extend the continuous track from the end of the train,

sists in carrying them on the same declining grade to the point where they are to be laid on the track.

Ties for laying two lengths of rails are loaded upon the automatic tie car, and run on the tram track from car to car, over all the cars used for carrying rails to the end of the train, and out upon the extension, and when the forward wheels of the car

specially adapted to mills requiring a large range of work, and is also suitable for railroad and car shops, bridge works, and large planing mills desiring a good surfacer and a good matcher, to stand up to both heavy and light work. The frame is cast plain, and is thoroughly braced and ribbed on the inside, giving great strength. The upper and lower cylinders are both forged, and made of the best hammered steel and slotted on all four sides, and the cylinders are both double belted. Any kind of a knife can be placed on these heads, as the double pressure bars on each side of the knife are adjustable to and from the knife. Moldings, patent siding, cove siding, ship-lap beading and work of that class can be done on it to the best advantage.

The feed is powerful, and consists of six 6-inch feed rolls, having a new improved expansion gearing device, which prevents either end of the roll from being forced down lower than the other, thereby making a very steady and reliable feed. There are two changes of feed, viz: 45 to 65 feet per minute. The machine is of a large range, planing 24 inches wide (either three or four sides), 6 inches thick and matching 14 inches wide. The patent adjustable swivel-box is a very ingenious contrivance, allowing the roll to adapt itself to any board of uneven thickness, thereby pre-



SIX-ROLL DOUBLE CYLINDER PLANNER AND MATCHER.

able tops, which unloads the ties automatically, is used upon the continuous track to deliver enough ties at each load for two lengths of rails to the track layers, who place them in position on the road-

with ties, and returns again in time for the next sixty feet layout. This process is repeated until the work is finished; the balance of spiking, tightening the bolts, and lining the track, is performed after the

venting an undue strain to gearing and screws.

The patent drop matcher is an improvement. The machine can be changed from a planer to a matcher, and vice-versa in one

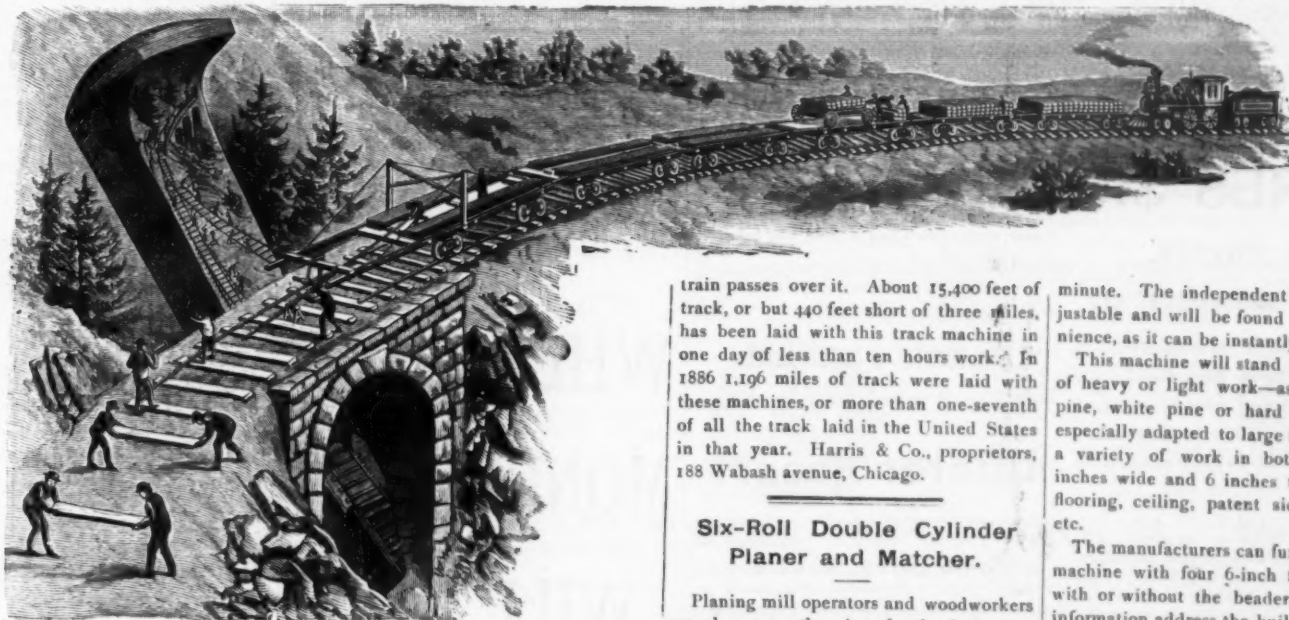


FIG. 2.—THE HARRIS TRACK-LAYING MACHINE AT WORK.

Rails are selected for the tram track from those to be laid into the permanent track, three or four feet shorter than the platform cars, and spiked permanently to the cross ties (there being five ties to a car) on each car of the whole train. To complete the tram track, short, adjustable pieces of rails are placed between each pair of cars

bed ready to receive the rails. Four rails (two for each side of the track) are bolted together with the angle plates on top of the train, and run out upon the rollers of the construction cars, and advanced to the double roller which continues them on a down grade until they are received on the roller of a low conical trestle, which as-

train passes over it. About 15,400 feet of track, or but 440 feet short of three miles, has been laid with this track machine in one day of less than ten hours work. In 1886 1,196 miles of track were laid with these machines, or more than one-seventh of all the track laid in the United States in that year. Harris & Co., proprietors, 188 Wabash avenue, Chicago.

Six-Roll Double Cylinder Planer and Matcher.

Planing mill operators and woodworkers are always on the alert for the latest improved machinery. The saving of time and labor, convenience, and rapid and perfect production are requisite in these progressive days. Such a machine embodying these features is here illustrated.

The cut represents a new No. 7 extra heavy double planer and matcher. This machine has been designed for general surfacing and matching where speed, strength and good work are desired. It is

minute. The independent beader is adjustable and will be found a great convenience, as it can be instantly set.

This machine will stand up to any kind of heavy or light work—ash, oak, yellow pine, white pine or hard wood—and is especially adapted to large mills requiring a variety of work in both, planing 24 inches wide and 6 inches thick; also for flooring, ceiling, patent siding, molding, etc.

The manufacturers can furnish this same machine with four 6-inch feed rolls, and with or without the beader. For further information address the builders, the Egan Co., Nos. 228 to 248 West Front street, Cincinnati, Ohio.

If you are not already a subscriber to the MANUFACTURERS' RECORD, send us \$4 and you will receive it regularly for one year, or six months for \$2.00.

THE PLACE FOR FACTORIES.

THE ROANE IRON CO.

WILL BUILD UP A

LARGE MANUFACTURING CITY

AT

ROCKWOOD, TENN.

AND IS PREPARED TO OFFER SUBSTANTIAL INDUCEMENTS TO MANUFACTURERS.

AS TO RESPONSIBILITY OF THIS COMPANY, PARTIES ARE REFERRED TO EITHER DUNN OR BRADSTREET.

FOR PARTICULARS ADDRESS

ROANE IRON CO., Rockwood, Tenn

West Salem Land Co.

SALEM, VA.

Authorized Capital, \$500,000

OFFER STOCK IN

Series C, New Castle Series.

SHARES \$10

PAR VALUE.

ARE SOLD TO SUBSCRIBERS AT \$5.

Payable, One Dollar When Subscription is Made, and One Dollar Each June 1, July 1, August 1 and September 1; at which time Certificates of Stock will be issued, declared Fully Paid up and Non-assessable.

The town of New Castle (or Craig City) is the county seat of Craig county, Va., and lies midway between the Chesapeake & Ohio Railroad at Eagle Rock, and the Norfolk & Western at Salem, Va. A branch of the Chesapeake & Ohio Railroad is now being built to New Castle, which will be completed about Sept 1, 1890. This road will open up the richest mineral region of Virginia, and cause great development of resources and consequent enhancement of values.

The property belonging to this series will be divided into about 600 business and residence lots, and will be sold for the benefit of the stockholders. Applicants for stock in series C will please remit \$1 per share to the West Salem Land Company at Salem, Va.

GEORGE ALLEN, President.
C. C. TOMPKINS, Secretary.

SUMTER

South Carolina,

is situated in Sumter county, midway between Florence and Columbia—40 miles from each—95 miles from Charleston, 125 from Augusta, Ga., and 136 from Wilmington, N. C., in the heart of an

EXCELLENT AGRICULTURAL COUNTRY.

It is on the Wilmington, Columbia & Augusta Railroad, and is the terminus of the Central of South Carolina as well as present terminus of the Eutawville Railroad, which is in course of construction to connect with railroads from Norfolk, with prospects of another in the near future.

It has a rapidly-increasing population, which at present numbers about 4,000.

ITS HEALTH IS UNSURPASSED

and it is one of the finest locations in the South for a

Winter Resort

for those seeking refuge from the cold blasts of the North.

A \$50,000 HOTEL is now under discussion, and any reliable hotel man who would like to engage in the undertaking can learn of something to his advantage by addressing Mayor Mood.

ICE FACTORY

is wanted; an Electric-Light Plant is now being put in, and Water Works are in progress.

Those seeking locations for

HOMES

or business will do well to correspond with the people of Sumter.

Six Trunk Line Railroads at
BESSEMER

In the heart of Mineral Alabama, encircled with hills of Coal, Iron and Limestone Rock.

"The South is the coming El Dorado of American adventure. May the Almighty speed and guide her onward progress!" So wrote the Hon. W. D. Kelley, M. C., of Pennsylvania, a few months ago, and every day brings forth new evidence to prove the correctness of his prediction and to show that without a doubt the South is to be the richest country upon the globe. In climate, soil, mineral and timber wealth, in rivers large and small, in a long seacoast, in abundant rainfall, in healthfulness and in every other advantage that could be asked nature seems to have done her best for this favored land. The wealth in iron and coal is beyond estimate. Of timber there is an unlimited supply, including nearly every variety of hardwoods for woodworking purposes.

WHERE
MONEY
WILL
GROW!

Seven Furnaces, output 1890, 250,000 tons; Rolling Mill, 100 tons daily; Fire Brick Works, 25,000 daily; Many Lesser Industries

Offers Thirty Varieties of Hardwoods for Woodworking Industries.

11,000 City Lots For Sale.

The Bessemer Land & Improvement Co.

this new year, are prepared to deal liberally for the founding of Iron and Woodworking industries in this growing Mining and Manufacturing Center.

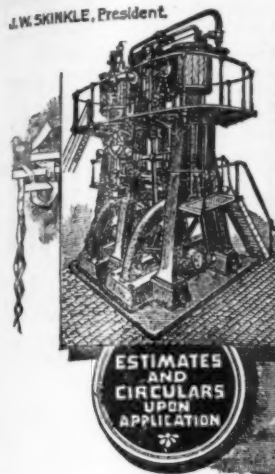
H. F. DeBARDELEBEN, Prest.

H. M. McNUTT, Secretary.

J. W. SKINKLE, President.

J. KOENIGSBERG, Secy.

L. E. RASSLEUR, Vice Pres.



**THE CONSOLIDATED
ICE MACHINE CO.**

MANUFACTURERS OF
**ICE MAKING
AND
REFRIGERATING MACHINERY.**

BRANCH
OFFICES
NO 210 EAST 54TH ST.
NEW YORK
CITY

WORKS &
PRINCIPAL
OFFICES
WEST 18TH ST. VIADUCT
CHICAGO ILL.

ESTIMATES
AND
CIRCULARS
UPON
APPLICATION

246 MACHINES

IN OPERATION

Making Ice—Refrigerating, Breweries, Packing Houses, Cold Storage
Houses, Oil Refineries, Creameries, Hotels, &c.

BUY THE BEST AND SAVE MONEY.

All machines built by us are made to gauge and templet. Highest
economy secured. Best results obtained. Machines in steady
operation for more than ten years.

NO FAILURES.

ARCTIC ICE MACHINE

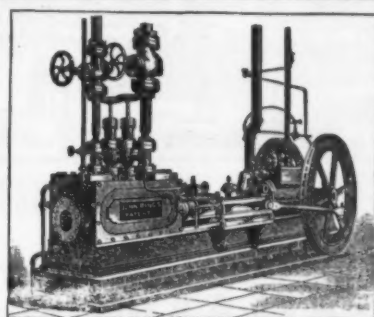
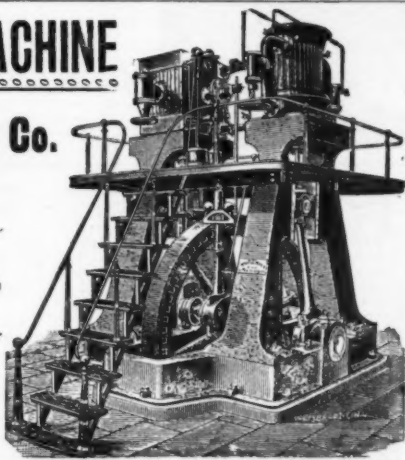
Manufacturing Co.

CLEVELAND, OHIO.

OFFICE AND WORKS,

4, 6, 8, 10 WEST ST.,
P. O. Box 92.

OUR OWN SHOPS.
MACHINES CARRIED IN STOCK
AND ORDERS
PROMPTLY EXECUTED.



For
Ice-Making and Refrigerating
MACHINERY,

Sizes 5 tons and upwards to 100 tons,

ADDRESS THE

Rinz Refrigerating & Ice Machine Co.

OFFICE:

213 CHAMBER OF COMMERCE,
ST. LOUIS, MO.

L. H. BECK, President.

I. NO. CAREY, Secy. & Treas.

W. COOK, Superintendent.

ATLANTA MACHINE WORKS,

MANUFACTURERS OF

The Cook Improved Absorption Ice Machine

Bollers, Tanks, Smoke Stacks, Shafting, Hangers, Pulleys,
Saw Mills, Mill Gearing.

GOLD MINING AND STONE-WORKING MACHINERY.

ATLANTA, GA.

ICE MACHINE PAINT.

Made expressly for use on all surfaces of either wood or metal coming in contact with water, acids,
ammonia, heat or cold. A DURABLE PAINT AT REASONABLE COST.

A. F. BOUTON & CO., 118 Gansevoort St., N. Y.

CHARLES BURGESS,

MANUFACTURER OF ALL GRADES OF

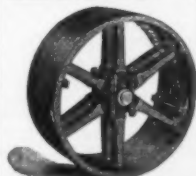
CRUCIBLE TOOL STEEL

Including SELF-HARDENING STEEL for NAILERS', LATHE and PLANER TOOLS.

Warranted Equal to any Brand Made. Extra Quality Cast Steel for Shears and all special tool purposes.

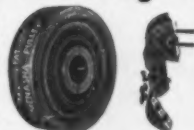
CYCLOPS STEEL WORKS, Titusville, Pa.

Menasha Hard Wood Pulleys.



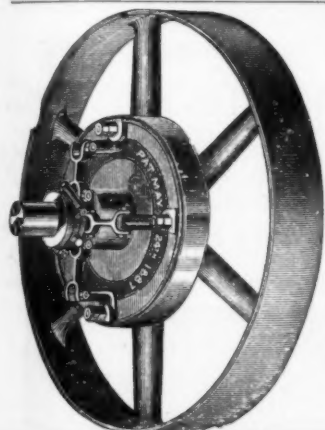
We are sole makers of hardwood bent rim,
oak spoke arm Pulleys; gripped to shaft with
bolts, and using patent paper bushings. They
can be put onto shaft without taking it down
or cutting keyseats. No glue or nails used in
their construction. Hub with bushing fits
any size of shaft.

Also sole makers of only small Split Pulley
1 inch to 8 inches in diameter, in the market.
See above cuts of them. No glue or nails in
them. No Keyseats to cut. Also sole makers of only Hickory Hanger
in the market; it has iron box. Send for illustrated circulars and
discount.



MENASHA WOOD SPLIT PULLEY CO., Menasha, Wis.

Branch Houses: Hoen & Von Kapff, Baltimore, Md.; Lodge & Davis Mach. Tool Co., New York City;
H. N. Bates & Co., Boston; Chas. A. Turner, Pittsburg, Pa.; Greene & Wood Mfg. Co., Philadelphia;
W. D. Allen & Co., Chicago and Minneapolis; E. L. Cole, New Orleans, La.; Thos. J. Bell & Co.,
Cincinnati; L. M. Rumsey Mfg. Co., St. Louis.



The MOORE & WHITE CO

1312 Buttonwood St., PHILADELPHIA, PA.

Friction Clutches, &c.

Cut-Off Couplings, &c.

Paper Mill

Machinery, &c.



COPYRIGHTED BY H. W. HILL, 1888.

HILL Clutch Works, CLEVELAND, OHIO.

NEW YORK:

18 CORTLANDT STREET.

CHICAGO: MINNEAPOLIS:

26 S. Canal Street. 306 Kasota Bldg.

KANSAS CITY, MO.:

121 Union Avenue.

POWER PLANTS

Designed, Erected and Furnished.

Send for new Catalogue, Power Trans-
mission Machinery.

ECLIPSE FRICTION CLUTCH PULLEYS AND CUT-OFF COUPLINGS.

SEATTLE, WASHINGTON TER., 5 26, 1889.

Eclipse Wind Engine Co., Beloit, Wis.

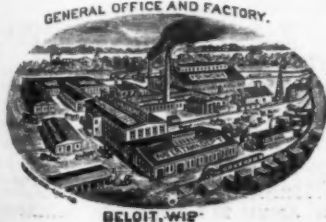
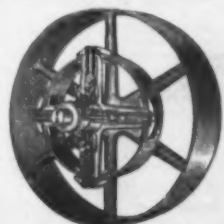
DEAR SIR: The Clutch Pulley (diam. 106 in., face 21 in.)
works satisfactorily in every particular, and is a great
convenience. We have two, and can stop either the main
saws or the range edger, or both whenever desired, without
stopping the engines. Yours respectfully,

Yosier Wood, Coal & Lumber Co.,
J. D. Lowman, Sec'y.

ECLIPSE WIND ENGINE CO., - Beloit, Wis.

Send for July, 1889 catalogue, and see where and by whom they are

St. JOSEPH, MO., June 24, 1889.
Beloit, Wis.
GENTLEMEN: The Clutch Pulley reached us all right;
it works to a charm. If we had put it on last April, in
place of one we had, we should now be ahead over \$800,
which we have lost in time and breakages. Yours,
The Brick & Terra Cotta Mfg. Co.,
F. P. Halsey, Sec'y.



BELOIT, WIS.

The STILLMAN,

CLEVELAND, OHIO.

Cuisine and service equal to the best New York hotels. Business men and tourists will find "The Stillman" quiet, elegant and homelike. Caters to the highest class of patronage at reasonable rates. **ONLY FIRE-PROOF HOTEL IN CLEVELAND.** Every Room Heated by Steam and Lighted by Electric Light. Elegant suites can be secured by addressing **J. WARREN COLEMAN, Jr., Manager.**



Hotel Fairmount

Hotel FAIRMOUNT

BRISTOL, TENN.

RECENTLY COMPLETED. A SUPERB HOSTELRY.

Large, Handsome, Well Built. Commodious and Well Ventilated Rooms. Broad Halls and Verandas. Elegantly Furnished. Equipped with Every Appliance that could add to the Comfort of its Guests.

The Fairmount is under the management of Mr. George L. Jacoby, who was manager of the Hotel Roanoke in its early and palmy days. It will be kept up to the highest showing of hotel excellence.

The Fairmount is on a hill in a beautiful park a short distance from the town center. In a few hundred yards is a large lake provided with bathhouses and boats.

It is preeminently the place for visitors from the South in summer, and from the North in winter. Bristol, like most of the mountain section of East Tennessee and Virginia, has a delightful climate the year round.

An orchestra is employed at the hotel permanently. For the convenience of commercial travelers, the hotel maintains a number of large sample rooms in the business center of the town. Street cars run to the hotel.

A comfortable, easy and elegant omnibus meets every train. Since it was opened, the Fairmount has done a constantly increasing business. Commercial men gather here from surrounding towns to spend Sunday. It is THE hotel of this rapidly growing town.

SOUTHERN PEOPLE, TOURISTS, TRAVELERS & BUSINESS MEN

SHOULD STOP AT

THE Beautiful and Elegant "NIACARA" HOTEL,

Front and Porter Ave.

BUFFALO, N. Y.

The Most Elegant Hotel in America. Situated commanding a beautiful view of Lake Erie and Niagara River. Spacious conservatory filled with rare exotics. Special rates made for parties remaining one week or longer. Hotel particularly well located for business men and the families. LATE DINNERS. MUSIC.

RATES—\$4.00 a day and upwards (American Plan.)

Telegraph for accommodations in advance at our expense.

HENRY F. ROESSER, Manager.

RYDER & DEARIE
DESIGNERS
WOOD ENGRAVERS & FINE COMMERCIAL PRINTERS.
PHOTO-ENGRAVING IN ALL ITS BRANCHES.
Specialists in fine Machinery and general Wood Engraving. Portraits, Buildings, etc. Artistic designs in Letter and Bill Heads, Business Cards, Display Lettering for advertising purposes, etc. Best work. Lowest prices. Electrotyping at lowest rates. 146 WESTMINSTER STREET, PROVIDENCE, R. I.

STEEL ENGRAVING.

PORTRAITS for Genealogical, County and Town Histories A SPECIALTY. Also VIEWS of MANUFACTORIES and DWELLINGS. Twenty-five years' experience. Eminent references given.

J. A. J. WILCOX,
24 Boylston Street, Boston, Mass.

ESTABLISHED 1876.

BUDDEN AND SON
10 & 12 W. WALL ST.
ATLANTA, GA.
PRINTERS & BINDERS.

Bonds. CERTIFICATES OF STOCK. Office Stationery. LABELS. SHOW CARDS & ADVERTISING NOVELTIES.

PRINTING PRESSES TYPE AND PRINTERS' MATERIALS OF EVERY DESCRIPTION. THE JOHN RYAN CO. BALTIMORE, MD.

AULT & WILBORG
PRINTING INKS.
CINCINNATI.
A&W INK USED ON THIS PUBLICATION.
BRANCH OFFICE,
152 and 154 Monroe Street, Chicago.



Issues Policies of Insurance after Careful Inspection of the Boilers, covering Loss or damage to property, and Loss of Life and Personal Injury

ARISING FROM STEAM BOILER EXPLOSIONS.

Full information concerning the plan of the Company's operations can be obtained at the COMPANY'S OFFICE, Hartford, Conn., or at any Agency.

J. M. ALLEN, President.
J. B. PIERCE, Secretary.

W. B. FRANKLIN, Vice-Prest.
F. B. ALLEN, 2d Vice-Prest.

BOARD OF DIRECTORS:

J. M. ALLEN, President.
FRANK W. CHENEY, Treas. Cheney Bros. Silk Mfg. Co.
CHARLES M. BEACH, of Beach & Co.
DANIEL PHILLIPS, of Adams Express Co.
RICHARD W. H. JARVIS, Pres. Colt's Fire Arms Mfg. Co.
THOMAS O. ENDERS, Pres. of the United States Bank.
LEVERETT BRAINARD, of The Case, Lockwood & Brainard Co.
GEN. WM. B. FRANKLIN, late Vice-Prest. Colt's Patent Fire Arms Mfg. Co.
NEWTON CASE, of The Case, Lockwood & Brainard Co.

NELSON HOLLISTER, of State Bank, Hartford.
HON. HENRY C. ROBINSON, Attorney-at-Law, Hartford.
HON. FRANCIS B. COOLEY, of the Nat. Exchange Bank, Hartford, Conn.
A. W. JILLSON, late Vice-Prest. Phoenix Fire Insurance Co., Hartford, Conn.
EDMUND A. STEDMAN, Treas. of the Fidelity Co., Hartford, Conn.
CLAPP SPOONER, Bridgeport, Conn.
GEORGE BURNHAM, Baldwin Locomotive Works, Pitts-
BON. NATHANIEL SHIPMAN, Judge U. S. Circuit Court

Maryland, Department—LAWFORD & McKIN, Gen. Agents 29 S. Holliday St., Baltimore.

ELIAS EDMONDS, Attorney at Law

SAN ANTONIO, TEXAS.

Makes the Litigation of Land Titles a specialty. Will also Lend Money for non-residents upon the best real estate security.

ATLANTIC TRANSPORT LINE, BETWEEN BALTIMORE AND LONDON

Calling at Swansea and Philadelphia on the outward passage.

S.S. Minnesota, 5,000 tons. S.S. Missouri, 4,300 tons.
S.S. Maryland, 4,300 tons. S.S. Michigan, (Bldg.)
S.S. Montana, 4,300 tons. S.S. Mississippi, (Bldg.)
S.S. Maine, 4,150 tons.
BALTIMORE STORAGE & LIGHTERAGE CO.
137 La Salle Street, and 137 Fenchurch Street
Chicago, Ill. London.
409 Second Street, Baltimore, Md.

THE BAY LINE

Fortess Monroe, Norfolk and the South.

The Bay Line comprises the New and Elegant Steamers

"VIRGINIA," "CAROLINA" and "FLORIDA"

All the Comforts and Luxuries of a First-Class Hotel are afforded the traveler. Spacious and elegant saloons and staterooms, furnished with an especial view to comfort. Unsurpassed Cuisine, which is made a specialty with this line. Elegant service and courteous attention. Steamer leave Baltimore daily (except Sundays) at 9 P. M. in Old Point Comfort is located the SPLENDID HYDRA HOTEL, a Delightful Resort at all seasons of the year. For Tickets and information apply at Company's office.

157 W. BALTIMORE STREET, BALTIMORE.

Or on Board of Steamers.

D. J. HILL, Superintendent.

E. BROWN, General Ticket Agent.

FAST TRAIN LINE.

Cleveland and Canton R. R. Co.

Newly Rebuilt to Standard Gauge.

New & Elegant Pullman Palace Cars. Heated by steam from the locomotive. No Stoves! No Danger from Fire! Three fast trains each way daily between Cleveland and Canton. Two fast trains each way daily between Cleveland and Zanesville. No change of cars between Cleveland and Zanesville.

J. W. WARDWELL, Gen. Supt.

ALBERT ROKUSEK, Gen. Pas. Agt.

A CHOICE LIST OF SUMMER RESORTS.

In the Lake regions of Wisconsin, Minnesota, Iowa and the two Dakotas, there are hundreds of charming localities preeminently fitted for summer homes. Among the following selected list are names familiar to many of our readers as the perfection of Northern summer resorts. Nearly all of the Wisconsin points of interest are within a short distance from Chicago or Milwaukee, and none of them are so far away from the "busy marts of civilization" that they cannot be reached in a few hours of travel, by frequent trains, over the finest road in the Northwest—the Chicago, Milwaukee & St. Paul Railway:

Oconomowoc, Wis.	Clear Lake, Iowa.
Minocqua, Wis.	Lakes Okoboji, Ia.
Waukesha, Wis.	Spirit Lake, Iowa.
Palmyra, Wis.	Frontenac, Minn.
Tomahawk Lakes, Wis.	Lake Minnetonka, Minn.
Lakeside, Wis.	Ortonville, Minn.
Kilbourn City, Wis.	Prior Lake, Minn.
(Dells of the Wisconsin.)	White Bear Lake, Minn.
Beaver Dam, Wis.	Big Stone Lake, Dakota.
Madison, Wis.	

For detailed information, apply to any coupon ticket agent, or send stamp for a free illustrated guide book, entitled "Cool Retreats." Address A. V. H. Carpenter, General Passenger Agent, Milwaukee, Wis.

Look Carefully through this paper and you may find an advertisement of some machinery or other goods that you are in need of. Preserve this copy for future reference

VALLEY RAILWAY

Short and Only Direct Route Between

CLEVELAND, AKRON, CANTON,
MARIETTA and WHEELING.

Only line running Pullman Buffet Sleeping Cars between Cleveland, Washington and Baltimore without change. Ask for tickets via Valley and B. & O. Route.

J. T. JOHNSON, J. B. CAVEN,
General Supt. Gen. Pass. Agent.

The D & C TO MACKINAC

SUMMER TOURS.

PLACE STEAMERS. Low Rates.

Four Trips per Week Between
DETROIT, MACKINAC ISLAND/
Potoskey, The Soo, Marquette, and
Lake Huron Ports.

Every Evening Between
DETROIT AND CLEVELAND
Sunday Trips during June, July, August and
September Only.

OUR ILLUSTRATED PAMPHLETS,
Rates and Excursion Tickets will be furnished
by your Ticket Agent, or address
E. B. WHITCOMB, G. P. A., DETROIT, MICH.,
THE DETROIT & CLEVELAND STEAM NAV. CO.

Old Kentucky Route.

Newport News and Mississippi
Valley Co., "E. D."

The THROUGH SLEEPER ROUTE

— TO —
Lexington, Ky. Louisville, Ky.
Chattanooga, Tenn. St. Louis, Mo.
Memphis, Tenn.
And All Points West and Southwest.

Only one night out to Lexington and Louisville. A sumptuous Pullman Sleeping Car leaves Washington, D. C., at 9:40 P. M. daily, attached to the C. & O. F. V. train, and runs through to Louisville. Be sure your tickets read via the N. N. & M. V. Co. and Lexington. Tickets via this route on sale at all C. & O. and P. R. R. stations. S. A. BROMBERG, T. P. A. J. L. MURPHY, G. P. A. Lexington, Ky. Lexington, Ky. J. D. YARRINGTON, 2d V. P., Lexington, Ky.

The Shenandoah Valley Illustrated.

The Shenandoah Valley Railroad Company issue a finely illustrated circular descriptive of the Valley of Virginia, famed from the days of Spotswood and the Horse-shoe Knights, and made historic by the deeds of Jackson, Sheridan and other great military chieftains of the late war. The book is a chronicle of a leisurely journey through the uplands of Virginia, with running descriptions of the caverns of Luray, the Natural Bridge and the Grottoes of the Shenandoah. Hardly a road of the famed valley is lacking in historic associations, and the map accompanying the publication will guide the visitor to the more famous spots. Certainly, no more interesting region worthy of the attention of the tourist is to be found than the Valley of Virginia.

This company also issues a pamphlet known as the "Shenandoah Valley," and treats entirely upon the great natural resources awaiting development in the Shenandoah Valley of Virginia.

Copies mailed free upon application to
O. HOWARD ROYER,
Geo'l F. & P. Agt., Roanoke, Va.

THE BRADSTREET Mercantile Agency

WAS ESTABLISHED IN 1849.

Is the oldest and financially the strongest organization of its kind, working in one interest and under one management, with more capital invested in the business, and expends more money every year for the collection and dissemination of its information than any similar institution in the world. Its reports are considered in the light of a guide by both investors and those contemplating the granting of credit. In addition to a large corps of skilled employees, more than one hundred thousand correspondents contribute the result of their investigation and opinions. Subscriptions are annual, and may commence at any time the subscriber elects. Details as to prices and terms will be furnished upon application.

CHARLES F. CLARK, President.
Baltimore Office—American Building.
M. KERSHAW, Supt.



PREMIER FLOUR OF AMERICA.

Patapsco Flouring Mills.
ESTABLISHED 1774.

PERFECTION IN FLOUR.

PATAPSCO SUPERLATIVE PATENT,
THE PREMIER FLOUR OF AMERICA,

IS UNSURPASSED FOR BREAD, BISCUIT OR PASTRY.

ASK YOUR GROCER FOR

PATAPSCO SUPERLATIVE PATENT, PATAPSCO FAMILY PATENT
ROLANDO CHOICE PATENT, ORANGE GROVE EXTRA.

C. A. GAMBRILL MFG. CO.

Office, 214 Commerce Street, Baltimore, Md.

RICHMOND & DANVILLE R.R. CO. (PIEDMONT AIR-LINE.)

THE SHORTEST AND DIRECT LINE FROM

Washington, D. C., and Richmond, Va.,

To Atlanta, Augusta, Columbia, Asheville, Raleigh, Greensboro, Salisbury, Goldsboro, Birmingham, Montgomery, Vicksburg, Shreveport, Mobile, New Orleans, Texas, Mexico and California, and the South and Southwest.

DOUBLE DAILY, SOLID TRAINS between Washington and Atlanta. Pullman's Palace Buffet and Drawing-Room Sleeping Cars without change to Atlanta, New Orleans, Augusta, etc.

For maps, time-tables, rates of passage, freight, etc., apply to nearest Station Agent of the Piedmont Air Line, or to any Railroad Agent of principal lines North or South.

FEYTON RANDOLPH, General Manager.

SOL. HAAS, Traffic Manager.

JAS. L. TAYLOR, Gen. Pass. Agent.



The East Tennessee, Virginia & Georgia R.V.

IS THE **SHORT LINE**

East and West, North and South.

Daily Sleeping Car Service Between

WASHINGTON and MEMPHIS,

WASHINGTON and NEW ORLEANS.

AND DOUBLE DAILY SERVICE BETWEEN

CINCINNATI and JACKSONVILLE
The Shortest Route. The Cheapest Route.

The Quickest Route. The Best Route.

B. W. WRENN, General Passenger and Ticket Agent, Knoxville, Tenn.
C. A. BENSCHOTER, A. G. P. A., Knoxville, Tenn.
C. A. DESAUSSEURE, A. G. P. A., Memphis, Tenn.
CHAS. N. KNIGHT, A. G. P. A., Atlanta, Ga.
L. H. BELL, A. G. P. A., Selma, Ala.

Western Maryland R. R.

Short Freight Line to Westminster, Frederick, Taneytown and Hagerstown, Md.; Waynesboro, Chambersburg, Shippensburg, Hanover, Gettysburg and Carlisle, Pa.; also points on the Frederick Division P. R. R., Gettysburg & Harrisburg R. R., Harrisburg & Potomac R. R., Shenandoah Valley R. R., Norfolk & Western R. R. and connections, also route of

Great Southern Despatch.

All rail Fast Freight Line for Southern and Southwestern points, via Bristol, Tenn. Freight received in any quantity at Hillen Station, and in car loads at Fulton, Canton and Jackson's wharf. Shippers desiring information will be called on. Send postal card with address to

B. H. CRISWOLD,

G. F. A., Hillen Station, Baltimore, Md.

The Finest on Earth.

The Cincinnati, Hamilton & Dayton R. R. is the only line running Pullman's Perfect Safety Vestibuled Trains, with Chair, Parlor, Sleeping and Dining Car service between Cincinnati, Indianapolis and Chicago, and is the Only Line running Through Reclining Chair Cars between Cincinnati, Keokuk and Springfield, Ill., and Combination Chair and Sleeping Car Cincinnati to Peoria, Ill.

And the Only DIRECT LINE

between Cincinnati, Dayton, Lima, Toledo, Detroit, the Lake Regions and Canada.

The road is one of the oldest in the State of Ohio and the only line entering Cincinnati over twenty-five miles of double track, and from its past record can more than assure its patrons speed, comfort and safety.

Tickets on sale everywhere, and see that they read C. H. & D., either in or out of Cincinnati, Indianapolis, or Toledo.

E. O. McCORMICK,

General Passenger and Ticket Agent.

— TAKE THE — Cleveland, Lorain & Wheeling R. R.

The Most Direct Route Between

CLEVELAND, OHIO,

and WHEELING, W. VA.

BEAUTIFUL SCENERY AND QUICK TIME.

No change of cars. For time cards, etc., address
OSCAR TOWNSEND, Gen'l Manager.

Wheeling & Lake Erie RAILWAY.

The New Through Line

Between Toledo and Bowerston, Pittsburgh, Marietta. Through Coaches between Toledo and Marietta. Through Sleepers between Pittsburgh and Chicago, and Day Coaches between Toledo and Pittsburgh, via Akron, Cuyahoga Falls, Kent, Ravenna, Leavittsburg, Warren, Niles, Girard, Youngstown, New Castle and Allegheny.

THE ONLY LINE RUNNING THROUGH

"BEAUTIFUL ZOAR"

A. G. BLAIR,

Traffic Manager.

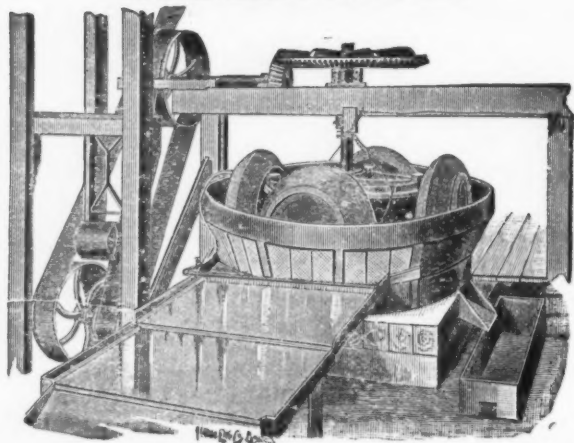
JAS. M. HALL,

Gen. Pass. Agent.

* WISWELL *

Ore Pulverizer and Amalgamator

COMBINED.



The following testimonial from Mr. Marsden, of the firm of Farrel & Marsden, manufacturers of Stone Breakers and Ore Crushers, Ansonia, Conn., speaks volumes for the Wiswell Mill:

Wiswell Electric Mining Machinery Co.:

GENTLEMEN—After carefully inspecting your mill and seeing it in operation, I do not hesitate to say that it is one of the best, if not the best pulverizer and most complete gold-saving machine I have ever seen. Please accept congratulations for your success.

S. L. MARSDEN.

WE FURNISH A COMPLETE MILL FOR \$2,500, DELIVERED ON BOARD CARS.

FOR FURTHER INFORMATION ADDRESS

Wiswell Electric Mining Machinery Company,

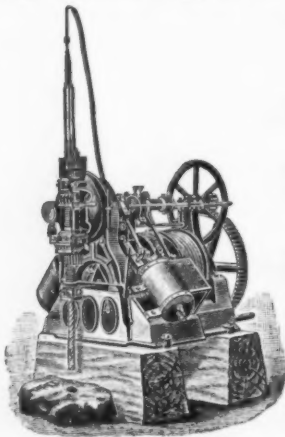
4 POSTOFFICE SQUARE,

A. A. REEVE, Treasurer.

BOSTON, MASS.

BUY THE BEST.

Bullock's Diamond Prospecting Core Drills,



Diamond Prospecting Drill.

For Surface or Underground Prospecting.

The Only Drills that will give an Accurate Record of every Strata Penetrated.

ALL DRILLS SOLD WITHOUT RESTRICTIONS.

Lane's Band Friction Hoisting Machinery

Drums from 2 Feet to 25 Feet in Diameter.

Improved Co liss Engines,

Slide Valve and Straight Line Engines,

Eclipse Rock Drills, Air Compressors,

Channeling and Quarrying Machines.

M. C. BULLOCK MFG. CO.

No. 138 Jackson Street,

Write for what you want. CHICAGO.

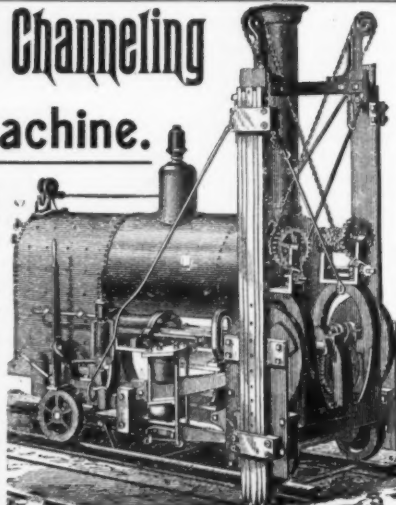
Cable Address: BULLOCK, CHICAGO.

THE Wardwell Stone Channeling AND Quarrying Machine.

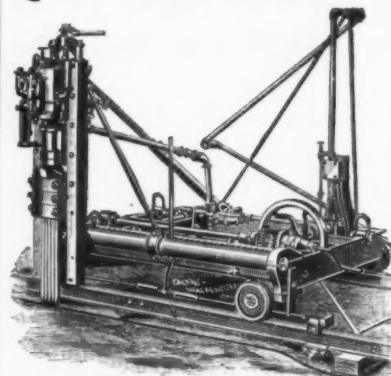
WILL pay for itself in a short time in reduced cost of getting out Stone. Has no equal for efficiency and economy of operation. Pronounced by those who have used it the best machine for the purpose in the world. Send for illustrated catalogue, with full descriptions and letters from parties now using the machines.

Steam Stone Cutter Co.

RUTLAND, VERMONT.



SULLIVAN DIAMOND POINTED AND STEEL QUARRYING MACHINERY.



SULLIVAN STEEL GANG CHANNELER.

Adapted in design and construction to do rapid work, with high economy of steam and few repairs, and with the greatest ease and convenience of operation.

Diamond Channelers,
Steel Channelers,
Diamond Gadders,
Diamond Prospecting Core Drills.

WE HAVE RECENTLY PUT ON THE MARKET A
**DIRECT ACTING
STEEL GANG CHANNELER**

Adapted in design and construction to do rapid work, with high economy of steam and few repairs, and with the greatest ease and convenience of operation.

Diamond Prospecting Co.

15 & 17 N. CLINTON ST., CHICAGO, ILL.

GENERAL AGENTS FOR

Sullivan Diamond Pointed & Steel Quarrying Machines
and Diamond Prospecting Core Drills.

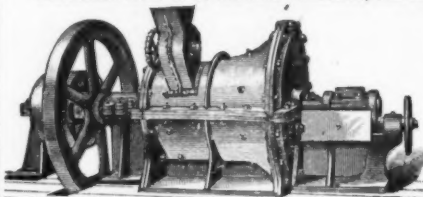
QUARRY HOISTS. STEAM PUMPS. BOILERS.

Contractors for Prospecting with the Core Drill. CORE DRILL—HAND-POWER.



The Greatest Pulverizer in the World.

Pulverizes from 10 to 160 mesh fineness, and has a capacity of 1 to 3 tons per hour.



For pulverizing Phosphates, Plumbago, Cement, Foundry Facings, Iron for Paints, Gold and Silver Ores, Flint Rock for Glass, Coke for Carbons, Palms, Asphalt Materials, Feldspar, Red Ochre, Sandstone, Limestone and Calcined Lime. Correspondence solicited. Send for samples of different products.

F. H. MOORE,
Manufacturer,

48 City Hall Bldg., Cleveland, O.

SEND FOR
CIRCULAR.



Cornish Rolls Pulverizer.

SIMPLE, DURABLE, COMPACT, DUSTLESS.

Finished Product Direct from the Machine.

The Best Ore Granulator for Leaching and Concentration in the World.

MANUFACTURE ALSO THE

GATES ROCK and ORE BREAKER.

Capacity the Greatest.

Requires the Least Power.

UNEQUALLED FOR BALLAST, ROAD, METAL, ORE CRUSHING.

Fine Crushing Plants a Specialty.

Concentrators and Other Mining Machinery.

GATES IRON WORKS

12 Portland St., New York U.S.A. 73a Queen Victoria St., E.C. London, Eng.
215 Franklin Street, Boston, Mass. 50 H. South Clinton St., Chicago, U. S. A.

WILLIAMSPORT WIRE ROPE CO.

MANUFACTURERS OF

Iron, Steel and Galvanized

WIRE ROPE

STREET CABLES A SPECIALTY.

WILLIAMSPORT, PA.

Correspondence Solicited with Southern Coal and Quarry Companies.

Lincoln Iron Works. Machinery

RUTLAND, VT. For working Marble, Stone and Wood Shafting, Pulleys and Gearing. Send for Catalogue.

DAVIDS' PATENT DISINTEGRATING MILL

For Bones, Phosphates, Tankage, Ores, Clay, Fish Scrap, Salt Cake, &c.
Fertilizer Machinery, Mixers' Rolls, Breakers, &c., &c. Marine
Railways, Clay Temperers. Send for Catalogue.

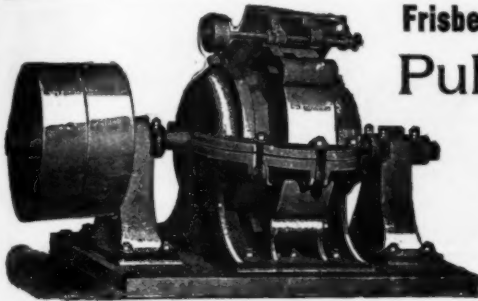
JAMES MURRAY & SON, 102 to 108 York Street, Baltimore, Md

McLANAHAN & STONE, Engineers and Manufacturers,
GAYSPORT FOUNDRY, HOLLIDAYSBURG PA.

Blast Furnace, Rolling Mill and Heavy Castings and Machinery for all purposes.

ORE JIGS, IMPROVED ORE WASHERS,
with Revolving Screens and Picking Tables.

Elevators and Conveyors, Etc.
Complete Plants for washing HEMATITE ORES at Least Cost.



Frisbee Lucop Mills for Pulverizing.

At half the cost of that by
Buhr Stones. Used by leading
Cement and Fertilizer Manu-
facturers. Finished Product.
No Tailings. Capacity up to
3 tons per hour. Record of
constant use for 6 years.

FRISBEE LUCOP MILL CO.
145 Broadway, New York.

ALLENTOWN FOUNDRY & MACHINE CO

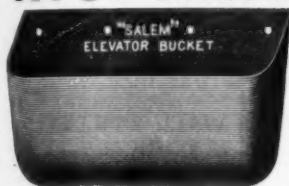
ALLENTOWN, PA.

ALL KINDS OF MACHINERY
FOR MINING AND WASHING HEMATITE ORES;
ORE JIGS, PUMPS, ENGINES AND BOILERS
FOR MANUFACTURING AND MINING PURPOSES;
PAINT, CEMENT AND BARK MILLS;
POWDER MILL MACHINERY;
LIGHT AND HEAVY MILL GEARING.

PULLEYS, HANGERS AND SHAFTING;
EUREKA TURBINES, BLAST FURNACE
WORK, SUCH AS BELLS, HOPPERS,
HOT BLAST STOVES,
TUYERE JACKETS, ETC.
LIGHT AND HEAVY CASTINGS
ROUGH AND FINISHED TO ORDER.

SEND FOR ESTIMATES AND PRICES.

W. J. CLARK & CO. Salem, Ohio,



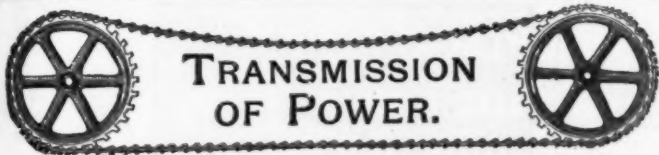
Elevating and Conveying Specialties

SOLE MANUFACTURERS OF THE

"Salem" Elevator Bucket

For Mill and Elevator Work, Ear Corn, Corn and Cobs,
Ores, Coal, Broken Stone, etc.

Send 9 cents (stamps) for postage on Sample Salem Bucket and Illustrated Catalogue.



TRANSMISSION OF POWER.

Machinery for Handling any Material in Bulk or in Packages.

The Link-Belt Engineering Company,

NEW YORK 49 Dey Street. Nicetown, PHILADELPHIA, PA.

Successors to BURR & DODGE, PHILADELPHIA,

AND
EASTERN BRANCH LINK-BELT MACHINERY CO.

New York.

EWART DETACHABLE LINK-BELTING,
DODGE CABLE CHAIN
ELEVATORS, CONVEYORS, LINK DRIVING BELTS.



BARNES' PATENT UPRIGHT DRILLS,

20 to 32 inch swing, with
both worm and lever feed,
self-feed and back-gear.

Barnes' Patent Engine Lathe,

15 inch swing, 6 foot or 8
foot bed.

These machines are made
a specialty in our factory.
They have advantages
not found in other ma-
chines in this line.

It will pay parties desiring to purchase or know more about these ma-
chines to send for full description and prices to

W. F. & JOHN BARNES' CO., 221 Ruby St., Rockford, Ill.

THOMAS K. CAREY & BROS., 56 Light Street, Baltimore Agents.

Barnes' Water Emery Tool Grinder.

Has no Pumps.

No Valves.

No piping to sup-
ply it with water.

It has nothing to
get out of order; is
always ready for
use.

It is as easily man-
aged as a grind-
stone, and will give
vastly better re-
sults. It will be
sold subject to ap-
proval.



THE HARRINGTON & KING

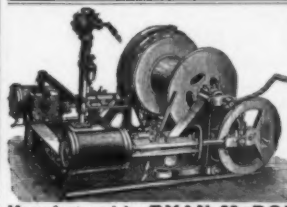


MAIN

OFFICE AND WORKS

224 & 226 NORTH UNION ST CHICAGO, ILL. U.S.A.

EASTERN OFFICE, No. 284 PEARL STREET, Cor. Beekman, NEW YORK.



Contractors' and Steam
Shovel Cars, Derrick Fly-
towers, Winches, Hoisting
Engines, Hoisting Drums,
Screw Drives, Portable
Engines, Rollers, Light
Locomotives, etc.

OFFICE:
WATERLOO, N. Y.
BALTIMORE, MD., No.
44 SOUTH ST.

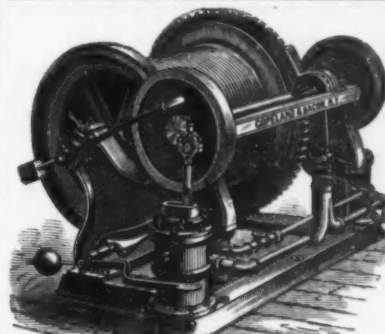


Manufactured by **RYAN-McDONALD MFG. CO.**

Shops and Warehouse, WATERLOO, N. Y.

Send for Illustrated Catalogue and Prices.

All correspondence should be addressed to Waterloo office.



BACON WINDING ENGINES, FURNACE HOISTS, MINE HOISTS.

(With or Without Boilers.)

"MINING PLANTS," Concentrating
Works and Dredging Machinery
Furnished Complete.

COPELAND & BACON

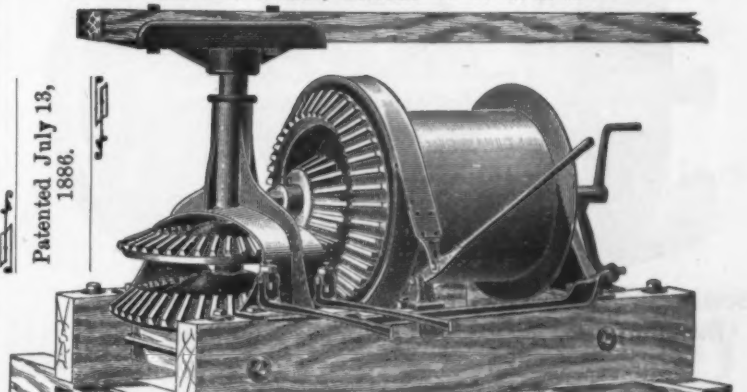
85 Liberty Street, New York.

585 Arch Street, PHILADELPHIA.

REFERENCES:—Croton Magnetic Iron Mines, Brewster's, N. Y. Crown Point Iron Co., Crown
Point, N. Y. Belvidere Iron Co., 52 Broadway, New York. Sea Island Chemical Co., Beaufort, S. C.

THE CONTRACTORS' PLANT MANFG. CO.

129 ERIE STREET, BUFFALO, N. Y. U. S. A.



Patented July 13,
1886.

AN IMPROVED HORSE POWER HOISTING MACHINE, with a combination
of fast and slow speed. With fast speed a horse will lift 2,000 to 2,500 lbs. on a single line at a speed
of 60 feet per minute, and with a single block 3,000 lbs. 40 feet per minute. With the slow speed a weight of
1 1/2 tons with a single line, and with a single block 3 tons; with two single blocks 3 tons; with double and
single blocks 7 tons. The speed single line 30 feet per minute, with single block 25 feet per minute.

In this combination of gears the user has the advantage of two machines embraced in one, with a saving
of 25 per cent. in cost and 60 per cent. in weight.

SIMPLE, DOES NOT GET OUT OF ORDER.

WRITE FOR ILLUSTRATED CATALOGUE OF

HORSE POWER HOISTING MACHINERY

For Bridge Builders, Contractors, Quarrymen, Mineral and Coal
Miners, Masons and Builders.

DERRICKS AND CONTRACTORS' SUPPLIES. Mention this paper when you write.

H. K. PORTER & CO., PITTSBURGH, PA., U. S. A.**Light Locomotives and Noiseless Motors**

All gauges of track for Passenger and Freight Service, Logging Railroads, Mines, Blast Furnaces, Steel Works, Coke Ovens, Contractors' Work and Plantations.

Photographs and illustrated catalogue on application. In writing mention MANUFACTURERS' RECORD.

Memo.—All work STEEL FITTED and built to duplicate system. Extra parts kept in stock. We keep on hand, ready for immediate shipment, LOCOMOTIVES AND MOTORS OF SEVERAL SIZES, WIDE OR NARROW GAUGE.

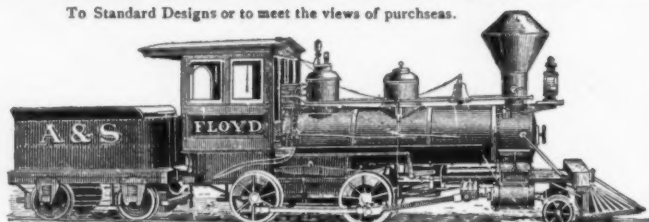


Established
in 1865.

Richmond Locomotive & Machine Works, RICHMOND, VA.

Builders of **LOCOMOTIVES** for every variety of service,

To Standard Designs or to meet the views of purchasers.



Motors for Street Railways, Tram Roads and Mines. Stationary Engines for heavy duty. Boilers, Standard or Special. Send for Catalogues, Specifications and Estimates.

DYOTT & CO. 52 WALL STREET NEW YORK.



Railroad Equipment AND SUPPLIES.

Locomotives, Cars, Rails, FASTENINGS, SPIKES, ETC. Frogs, Crossings, Switches, &c. Securities negotiated. Contracts taken.

ESTABLISHED 1847.

PHILADELPHIA.

A. WHITNEY & SONS, Chilled Wheels for Engines and Cars,

Cast in the Whitney Contracting Chill and Warranted Smooth and Round Without Grinding.

STEEL-TIRED WHEELS WITH CAST-IRON CENTRES, SPOKE OR PLATE PATTERN.

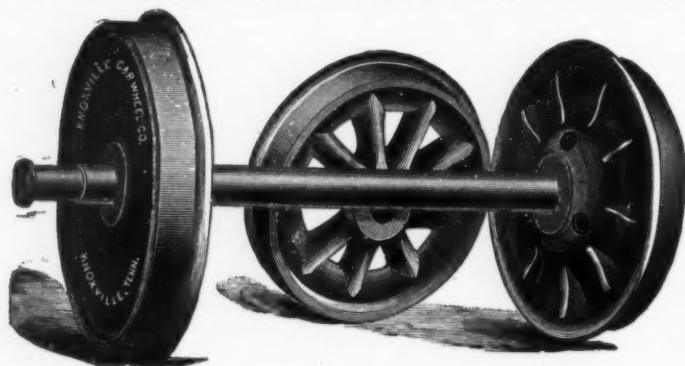
Knoxville Car Wheel Co.

—KNOXVILLE, TENN.—

Manufacturers of All Kinds of

CHILLED WHEELS

For Railroads, Street Railroad. Ore and Coal Mines, and Lumbermen.



Steam Hammers,
Steam Hoists,
Foundry Cupolas,
Derricks, Crabs,
Horse Powers,
Shieves, Drill Heads,
Gearing, Pulleys,
Bolts of all sizes,
Locomotives and Engines
Repaired and Indicated.

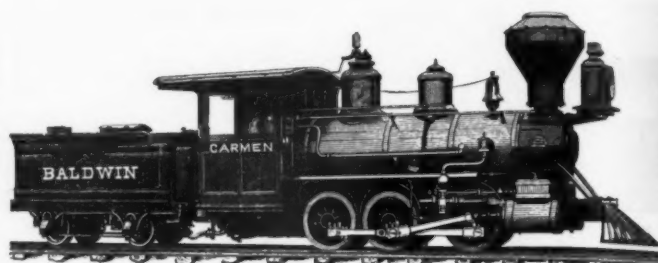
CORRESPONDENCE SOLICITED.

Steel and Iron Boilers,
Guild's Automatic
Boiler Cleaner,
Car and Locomotive Castings,
Soft Iron Castings of all kinds.
Heavy Castings a specialty.
Wheels mounted on Axles if
desired, with Oil Boxes
and Bolts.

MENTION THIS PAPER.

BALDWIN LOCOMOTIVE WORKS

ESTABLISHED 1831.



ANNUAL CAPACITY 1881.

Locomotive Engines, Locomotives for Logging

Adapted to every variety of service, and built accurately to standard gauges and templates.

RAILROADS AND SUGAR ESTATES.

Steam Tramway Motors, Mine Locomotives, Furnace Locomotives.
Burnham, Parry, Williams & Co., PROPRIETORS, Philadelphia, Pa.

In writing, please refer to Manufacturers' Record.

STEEL RAILS

PENNSYLVANIA

Standard Sections
Light Sections
Street Rails

Fish Plates,
Frogs, Switches

STEPHEN W. BALDWIN
SALES AGENT

STEEL COMPANY

50 to 80 lbs. per yard
16 " 45 " " "
30 " 88 " " "
Bolts & Nuts,
and Crossings.

NO. 2 WALL STREET
NEW YORK N.Y.

16 lbs. Full Size.

PECK'S PAT. DROP PRESS
BLAST FORGES
STEEL & IRON DROP FORGINGS.
Drop Dies and Special Machinery.
BEECHER & PECK, NEW HAVEN CONN.

UNION DRAWN STEEL CO.

COLD DIE, ROLLED STEEL AND IRON

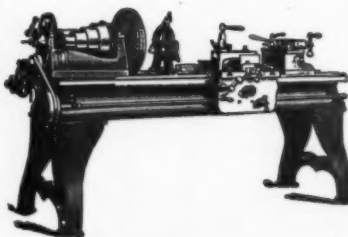
SHAFTING.

Piston Rods, Pump Rods, Guides and Shapes.

OFFICE AND WORKS. BEAVER FALLS, PA.

THOS. K. CAREY & BROS.

No. 26 LIGHT STREET, BALTIMORE, MD.



IRON AND
WOOD-WORKING

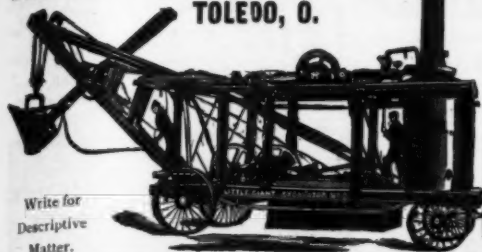
Machinery.

Engines, Boilers, Duplex Pumps, Lathes, Planers, Drill
Presses, Pulleys, Shafting, Hangers, Belting, &c.

Railroad and Mill Supplies, Machinists' Tools, Etc.

The Vulcan Iron Works Co.

TOLEDO, O.

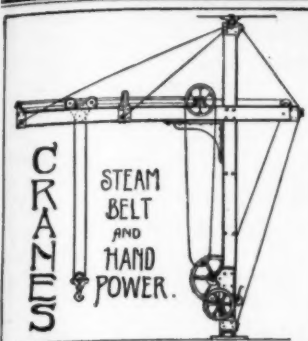
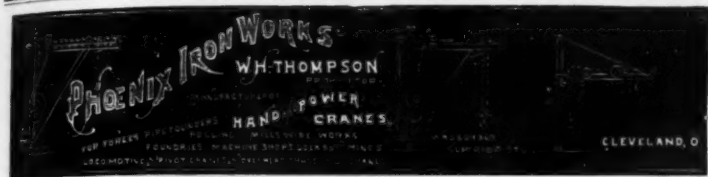


Write for
Descriptive
Matter.

MANUFACTURERS OF
Dredges and Excavators,
MARINE, HOISTING and
STATIONARY ENGINES,
Foundry, Rolling Mill and
Dock Cranes.

A general line of Plain and Or-
namental Boiler Fronts and
Fittings and General
Founders.

The "Little Giant" Excavator
WEIGHT 20 TONS.
Capacity 1,500 cub. yds. per day
The "GIANT" RAILROAD EXCAVATOR,
WEIGHT 40 TONS.
Capacity 2,000 cub. yds. per day



Detroit Foundry Equipment Co.

DETROIT, MICH.

WHITING'S IMPROVED Car Wheel Foundry Plant.

The Whiting Cupola Foundry Ladles and
Reservoirs, Elevators, Clay Grinders,
Wheel Breakers, Tumblers, Snap
Flasks, Wheelbarrows, &c.
Correspondence Solicited.

RIVETS

HOOPES & TOWNSEND,
PHILADELPHIA, AND

The HOOPES & TOWNSEND CO.
WILMINGTON, DEL.

Cone, Button, Flat, Rose, Counter-Sunk, Button Counter-Sunk and Steeple Heads.

BOILER,

SHIP,

CAR,



STACK,

BRIDGE,

TANK,

COOPER

RIVETS

ESTABLISHED 1832 ON PRESENT PREMISES.

The Best
—IS—
ALWAYS
—THE—
Cheapest.



Therefore
BUY OUR
COLOPHINE
—OR—
Perfect Oils

The above are our specialties in MACHINERY OILS, and are the best oils for
the price manufactured. We can give you anything in the OIL LINE, any grade, at
the very lowest prices. Correspondence solicited.

WM. C. ROBINSON & SON,
MANUFACTURERS AND DEALERS IN OILS,

217 South Street Baltimore, Md.

WROUGHT IRON PIPE-FITTINGS-BRASS AND IRON COCKS AND VALVES-SUPPLIES-
STEAM AND GAS FITTERS' TOOLS-PIPE COILS AND RADIATORS-ENGINEERS' SUPPLIES-
STEAM GLUE HEATERS-IRON AND BRASS RAILING FITTINGS-ENGINEERS' SUPPLIES-
AT THIS SEASON OUR AWNING-FRAME FITTINGS ALWAYS HAVE A "BOOM" AS ANY ONE CAN
FOR THIS WORK BUILD AS GOOD AWNING FRAMES AS THE MOST SKILLED BLACKSMITH CAN.

DO YOU USE OR DEAL IN ANY OF THESE GOODS? OR DO YOU WISH TO KNOW ANYTHING ABOUT THEM? IF YOU DO MENTION THIS ADVERTISEMENT WHEN YOU ADDRESS

PANCOAST & MAULE,
PHILADELPHIA,
—PA.—

UNION BRASS FOUNDRY, Lowell, Mass.

MANUFACTURERS OF ALL KINDS OF

Brass and Composition Castings, Babbitt Metals, &c.
THOS. J. DELANY & CO.

Special attention given to the manufacture of heavy BRASS CASTINGS. Send for estimates.



PHOSPHOR-BRONZE
INGOTS, CASTINGS & MANUFACTURES.
THE PHOSPHOR BRONZE SMELTING CO. LIMITED
512 ARCH ST. PHILADELPHIA PA. U.S.A.
ORIGINAL MANUFACTURERS OF PHOSPHOR-
BRONZE IN THE UNITED STATES AND OWNERS
OF THE U.S. PATENTS.

STEEL CASTINGS

From 1-4 to 15,000 lbs. Weight.

True to pattern, sound, solid, free from blow-holes, and of un-
equalled strength. Stronger and more durable than iron forgings in
any position or for any service whatever. 60,000 CRANK SHAFTS
and 50,000 GEAR WHEELS of this steel now running prove this.
CRANK SHAFTS and GEARING specialities. STEEL
CASTINGS of every description. Send for circulars and prices to

CHESTER STEEL CASTINGS CO.

Office, 407 Liberty St., Philadelphia. Works, Chester, Pa.

BRADLEY AND FORCES

BEST HAMMERS IN THE WORLD RUN BY BELT

OVER
1500
IN USE

Three Styles, 15 lb. to 500 lb. Heads.

Our FORCES heat irons fast enough to keep Hammers
and Men fully employed. Send for Catalogue and Prices.

BRADLEY & CO., SYRACUSE, N. Y.

14 WARREN ST. NEW YORK. 96 & 98 SUDBURY ST. BOSTON.

The D. E. Whiton Machine Co.

45 Oak St., New London, Conn.

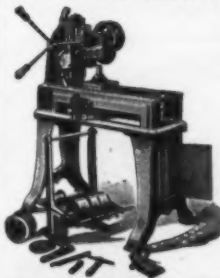
—MANUFACTURE A—

SIMPLE, CONVENIENT,

ACCURATE and

MODERATE PRICED

Gear Cutting Machine



Which will do ALL KINDS of Gear Cutting, including Worm
Bevel and Face Wheels. It is in Extended Use through-
out North and South, and FULLY WARRANTED.

Sent on trial to responsible parties. Send for circulars.

Build & Repair Your Machinery

BY USING

Engine Lathes, Planers,
Chucking Lathes, Hand Lathes,

—AND—

MACHINE TOOLS GENERALLY

MANUFACTURED BY

LATHE & MORSETOOL CO.

Worcester, Mass., U. S. A.



Established 1845.

T. K. Carey & Bros.

Southern Agents,

BALTIMORE, MD.

Stuebner & Woods

MANUFACTURERS OF

**Self-Dumping Steel & Iron
Hoisting Tubs,**Side and Bottom Dumping
Cans for Coal Elevators,
Iron Wheelbarrows, Hoisting
Blocks, Bottom-dumping Tubs
for Coaling Locomotives, &c.

LONG ISLAND CITY, N. Y.

Send for circular and price-list



THE HONEST HORSE RACE

A.W. HOUGHIN, SPECIAL MACHINERY DESIGNED.

CATALOGUES FREE

BROOKLYN, N.Y.

FINE SHOWN CASES.

Ask for catalogue.

TERRY MFG CO. NASHVILLE, TENN

The Spragg Automatic

BRAKE HOISTAnyone that has
any Hoisting or
Raising of Mate-
rials of any kind
cannot afford to
be without it.Send for
Illustrated Circular

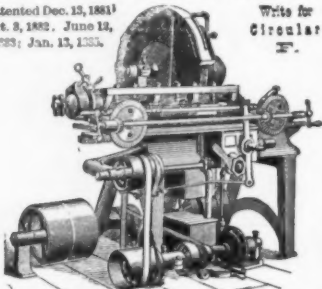
Sole Philadelphia Agents:

PALMER, CUNNINGHAM & CO.
LIMITED.

607 Market Street, PHILADELPHIA.

SPRINGFIELD EMERY WHEEL MFG. COMachinists to Springfield Wheel & Emery Wheel Co.
Bridgeport, Conn.

Western Branch, 18 & 20 Randolph St., Chicago, Ill.

Patented Dec. 15, 1881
Oct. 8, 1882, June 12,
1883, Jan. 13, 1885.Write for
Circular
F.It is the only Grinder run with water to prevent heating
and drawing the temper. Once in motion requires no at-
tention. Will ship on its merits for 30 days' trial, and if
not satisfactory can be held subject to our order.**ROLLER and****Detachable Chain Belting,**

Detachable in Every Link,

FOR IMPROVED

ELEVATORS,

CONVEYERS,

AND

Driving Belts

FOR HANDLING

Coal, Ores, Grain,**CLAY, BRICK, &c.**

ADDRESS

The Jeffrey Mfg. Co.

121 W. State St., Columbus, O.

Also manufacturers of the
Jeffrey Electric Coal Mining
Machines, Coal Drills and
Haulage System. Send for
our illustrated (1890) cata-
logue.**HOWELL & LOCKWOOD,****General Dairy Supply House,**

112 Chambers St., New York City.

Every Requisite for Milk, Butter and
Cheese Industries.

Write for Catalogue.

DAIRY MACHINERY

Complete Outfits a Specialty.

H. McK. WILSON & CO.

ST. LOUIS, MO.

Handsome Dairy Illustrated Catalogue mailed
free on application.**WHICH? BUTTER OR
CHEESE.**If either or both, send for
J. S. CARTER'S Illustrated
Catalogue, which gives full in-
formation of latest and best method
and appliances for making Cheese
or Butter, from the largest fac-
tory to the small dairy.
Carter's Cream & Buttering
System of Butter Making is success.
JOHN S. CARTER, Syracuse, N. Y.**R. M. JOHNSON,**Manufacturers' Agent and Dealer in Corliss,
Automatic Cut-Off and Plain Slide Valve**Steam Engines and Boilers,**Saw Mills, Machinists' Tools, Wood-Working
Machines, Mining, Brick, Ice, Grist Mill, Dairy,
Canning and Electric-Lighting Machinery a
specialty; also Double Cylinder Traction En-
gines. Complete outfits supplied at lowest prices.
Correspondence is solicited.**R. M. JOHNSON, Wheatland, Va.****INDUSTRY FILE WORKS,**A. & H. GOUGH, Proprietors,
Manufacturers of**Files and Rasps**Equal to the best English File.
OLD FILES REOUT.

All kinds of Job Grinding.

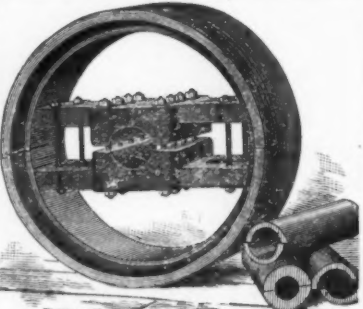
OFFICE AND WORKS,

48 Columbus St., Cleveland, O.

C. GOUGH, Manager.

SAVE MONEY.

BEFORE YOU BUY

BICYCLE OR TYPEWRITERSend to A. W.
GUMP & CO.,
Dayton, O., for
prices. New Bi-
cycles at re-
duced prices,
and 400 second-
hand ones. Dif-
ficult repairing. Bicycles, Guns and Typewriters
taken in Exchange.

PATENTED MAY 29, 1888.

DOUBLE STRENGTH

WOOD SPLIT PULLEY,

MANUFACTURED BY

Chattanooga Wood Split Pulley Co. Chatt., Tenn.Subscribe to the MANUFACTURERS' RECORD.
Price \$4.00 a year, or six months for \$2.00.**STEAM HEATING.****Barnard's Condensing System**

will accomplish the following desirable features:

**SAVES COAL, PERFECTS
THE CIRCULATION,
PREVENTS ALL NOISE,
PREVENTS FREEZING,**Uses Exhaust Steam if any, without back pres-
sure, will work at any pressure of steam, high or
low, has no machinery needing care. Is adapted
to Private Houses, Flats, Office Buildings, Hotels,
Factories, &c.**GEO. A. BARNARD, 15 Cortlandt St., N. Y.****Reducing Valves**Ours are the Standard
used by the American and
Southern Cotton Oil Com-
panies and over 30 Rail-
roads.

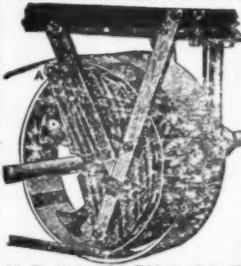
SEND FOR PRICES.

**Damper Regulators,
Pump Governors, Etc.****Mason Regulator Co.**
BOSTON.**We Blow Our Own Horn**Because we have to do so,
and while you listen you can hear us say
"JONES, HE PAYS THE FREIGHT"
on the best SCALE made.**5-ton Cotton Gin Scale \$60.**

For terms and prices on the

UNITED STATES STANDARD SCALE.

Buy of your jobber or address

**JONES OF BINGHAMTON, Binghamton,
N. Y.****The WELLINGTON BELT HOLDER.****LATELY
IMPROVED.**
Just the thing
to shift large
belts driving
Dynamoes, Blows,
Gins, Saws,
&c. Belt stops
and slackens
when machine
stops. Thousands
in use, cost
very low. Sent
on trial. Permit
us to quote you
prices.**W. R. SANTLEY & CO. Wellington, Ohio****TAPER-SLEEVE PULLEY WORKS**211 W. 12TH ST.
ERIE, PA.Manufacturers of
Taper-Sleeve Wood
Belt Pulleys, Adjust-
able Dead Pulleys,
Friction Clutch Pul-
leys, Friction ClutchCouplings, Wood
Pulleys in Halves
Taper-Sleeve and
Compression Cou-
plings, Shafting, Post
and Drop Hangers.
Correspondence so-
lited.

Address: Erie, Pa.

BERNHARD DIETZ, Manufacturer of Printers' Rollers
and Roller Composition. Factory, N. E. Cor. Grant
and Mercer Sts., Baltimore. Prices: Composition (bulk)
10 cents per pound, for cutting, also 20 cents per pound.
Orders by mail promptly attended to.**SHEPARD'S New \$60 SCREW-CUTTING FOOT LATHE**
Foot and Power Lathes, Drill
Presses, Scroll Saw Attachments,
Chucks, Mandrels, Twist Drills,
Dogs, Calipers, etc.
Lathes on trial. Lathes on
payment.
Send for catalogue of Outfits
for Amateurs or Artisans.
Address **N. L. SHEPARD, Agent,**
134 E. 2d Street, Cincinnati, Ohio.

Get Lathes, \$1.25

IF YOU ARE BUILDING

**IF YOU ARE
BUILDING**

Write us for a copy of our book on

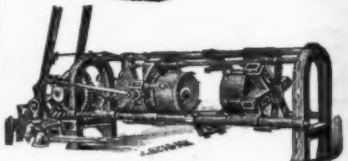
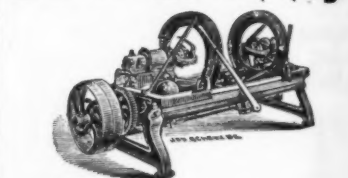
"A TIN ROOF"

ALSO OUR

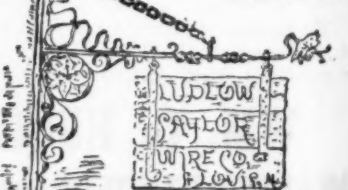
"FORMULÆ,"Containing full information about
tin roofing; showing how to select,
lay and paint, and how to specify for a
tin roof in order to obtain best results.Either or both Pamphlets sent
FREE OF COST.If your building needs ventilation,
or you are troubled from downward
draft in your chimney, write us for
information relative to our**STAR ★ VENTILATOR.****MERCHANT & CO.**PHILADELPHIA.
NEW YORK.CHICAGO.
LONDON.**E. & B. HOLMES,**

BUFFALO, NEW YORK,

MANUFACTURERS OF

Barrel Machinery.**Chambers Patent Barrel Heater.**Capacity 300 tight or 500 slack barrels per day.
The best Heater made.**E. & B. HOLMES, Sole Agents.****WIRE RAILING**

and Ornamental Wire Works.

JUPUR & CO. 113 & 115 N. Howard St., Baltimore.Wire Railing for Cemeteries, Lawns, Gardens, Of-
fices and Balconies; Window Guards, Tree Guards,
Wire Cloth, Screens, Fenders, Cages, Saws and Cut
Screens, Iron Bedsteads, Chairs, &c.**WIRE & WIRE GOODS.**Wire Cloth, Rope. SCREENS for
Coal and Ores. Barbed and
Plain Fencing Wire. Bank
and Office Railings.

Artistic Work a Specialty.

Send for catalogue and mention this paper.

Read What a New York Miller Says of the Case Company.



OFFICE OF PETER SNYDER,
DEALER IN FLOUR, FEED AND LUMBER,

MANLIUS STATION, N. Y., October 28, 1889.

The Case Manufacturing Company, Columbus, Ohio:

GENTLEMEN: After running my mill over two months, I feel it my duty and in justice to you to state that I am more than pleased with the mill you built for me. It started like a clock "from the word go". My flour is discounting the fanciest brands of flour in the market. My clean-up is equal to any mill in the State. I will say that the Case Rolls and Flour Dressers cannot be beaten in the world for light running and ease of access to all their parts. I would advise any miller building a new mill or remodeling an old one to place their contract with the Case Company.

Thanking you for the prompt and efficient manner in which you furnished my machinery in so short a time, after so great a loss and damage by fire burning your works, and with the best of wishes I remain,

Yours respectfully,

PETER SNYDER.

For full particulars regarding the best FLOUR OR CORN MILL MACHINERY, address



THE CASE MANUFACTURING CO., Columbus, Ohio.

TRADE NOTES.

THE demand for lumber at Basic City, Va., is so great that J. C. Jones, contractor and builder, of that place, advertises elsewhere for 1,000,000 feet of flooring, ceiling and finishing lumber.

STEAM users in the South who are preparing to shut down for repairs during the summer months, should bear in mind that it is a good time to buy a feed water heater and purifier. In this connection attention is called to the advertisement of Wm. Baragwanth & Son, Chicago, Ill., who have for many years manufactured and sold heaters and purifiers in all parts of the country, which have given the best of satisfaction.

THE Union Foundry & Machine Co., of Catasauqua, Pa., writing under date of June 5, says: "Wherever placed, the Reliance safety water columns have given entire satisfaction. The Brydon Horse Shoe Co. evidence this in their third order." The Reliance Gauge Co., Cleveland, Ohio, manufacturers of these safeguards, reports that fully one-half of its business at the present time is repeated orders from people who have been using them from one to five years.

RAYMOND BROS., of pulverizer fame, 303 to 311 South Canal street, Chicago, are shipping several of their latest improved pulverizers to mineral paint works in the West to replace other mills grinding a very hard iron ore at a cost of \$6 per ton. The Raymond Bros.' pulverizer will do the same work, it is claimed, grinding 15 tons per hour at an average cost of 75 cents per ton. An illustration of this new and wonderful pulverizer, which is well adapted for Southern ores, clays and phosphate rock, will shortly appear in the MANUFACTURERS' RECORD.

THE F. C. Austin Manufacturing Co., of Chicago, Ill., extensive makers of road machines, ditching and irrigating machinery and railroad contractors' supplies, has published a handsomely illustrated catalogue, which fully describes the working and great economy gained by using modern contrivances over the old foggy method of road building. The company's railroad grader is now used in the construction of many leading railroads, and enables the contractor to push work in a most astonishing manner. Catalogues will be sent upon application.

THE prospectus of the Grottoes Co., at Grottoes Station, or, as it is soon to be called, Shendun, on the Shenandoah Valley Railroad, in Augusta and Rockingham counties, Virginia, is just at hand. This company was organized on May 6, and is now in condition to consummate its scheme of organization. The capital stock of the company at the outset will be \$3,000,000,

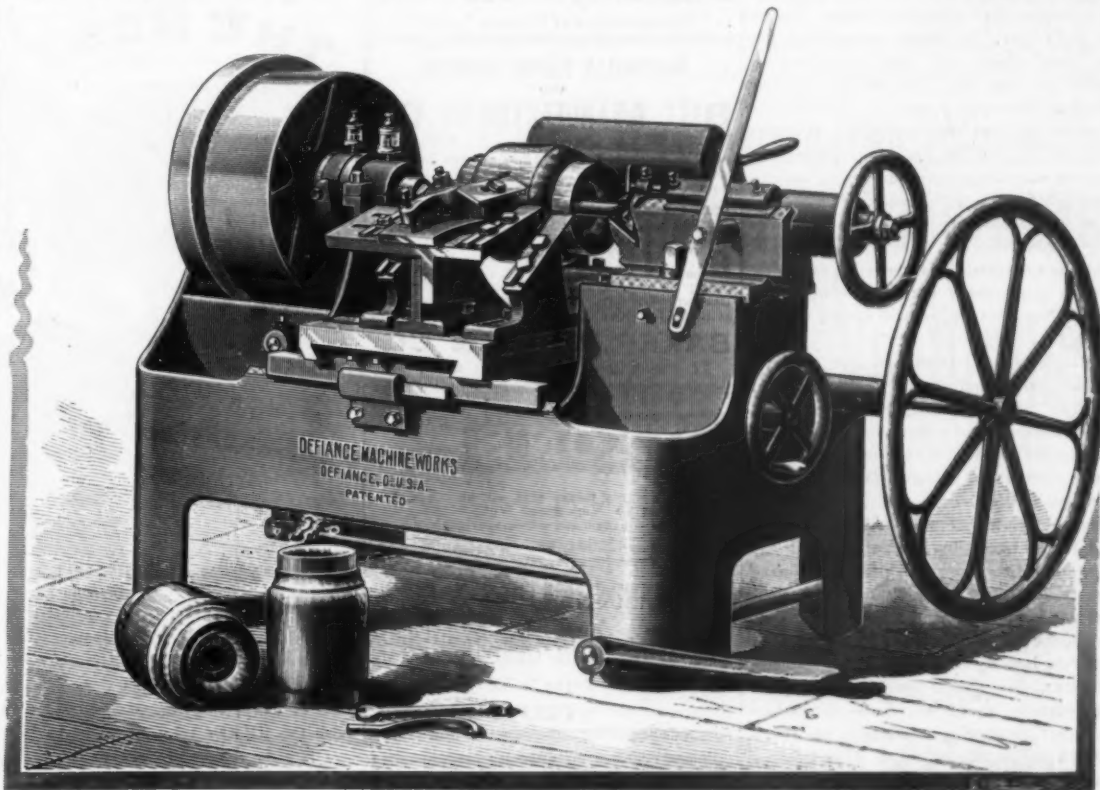
though it has power to increase this to \$6,000,000. The basis of this stock is an area of some 30,000 acres of town-site, mineral and timber lands, including the famous grottoes. The iron ores on the property are among the highest grade yet found in the Blue Ridge range, averaging, it is claimed, nearly 50 per cent. in metallic iron and low per cent. in silica and phosphine acid. Rich deposits of manganese have also been found, and some of them have been developed. On the Grottoes property is the Grottoes Hotel, besides pic-nic grounds, boating facilities, etc. The prospectus shows that the company has a very valuable property, which is most advantageously situated. The stock is ready now to be placed on the market.

operation, more uniform and perfect and at an immense saving over hand turning. The body of the machine is composed of iron, a massive casting in one piece, of neat design and sufficient weight to stand firm without fastening to the floor, performing the heaviest turning without jar or injury to the working parts. Floor space occupied 6 feet 6 inches by 3 feet 6 inches.

The table is built in two parts. The lower half is gibbed and fitted to the frame in V shaped ways with adjustment horizontally in line with the mandrel by hand wheel and screw to center the knives with the hub block. The upper table, with the roughing and finishing knives attached at either end, is mounted upon and gibbed to the lower table, and it slides from right to

consisting of a body knife with cutting edge shaped to correspond with the style of hub to be turned; a flat knife at either end upon the same stand, for cutting the front and back bands with adjustment for cutting bands of different widths and diameters. The cupping attachment is gibbed to the tail stock and provided with gauge to regulate the depth of cup. A powerful friction clutch communicates power to revolve the hub. The frictions are engaged or disengaged by foot treadle conveniently located to the operator. A single movement of the operator's foot upon the treadle instantly starts or stops the machine without shifting the belt or changing position.

The operator has complete control over the machine. As the material to be oper-



NO. 1 PATENT AUTOMATIC HUB-TURNING MACHINE.

Patent Automatic Hub-Turning Machine.

The No. 1 patent automatic hub-turning machine, illustrated herewith, is one of the largest and most powerful machines of its class, designed especially for making carriage and wagon hubs of different sizes and shapes up to 20 inches diameter, 18 inches long at the largest, having a capacity for finishing 600 heavy hard wood hubs in 10 hours, or roughing out 2,500 blocks. The machine receives the block in its rough state, performs the roughing, turning, cupping, finishing the ends, cutting beads and shoulders for bands, making hubs any shape or size complete at one

left at right angles with the mandrel by turning the large hand wheel to bring either the roughing or finishing knives up to the hub block to be operated upon. The roughing knife with straight face 18 inches long, is held in the stand at the back end of the sliding carriage, with its cutting edge extending downward, and when in operation removes the surplus material from the hub block in the form of a veneer or ribbon 1/4-inch thick full length of hub at one cut, requiring no adjustment for length or diameter of block. A gauge governs the depth of cut or feed. The finishing knives are located at the opposite end of the carriage from the rougher, with their cutting edges extending upward,

ated upon revolves, the roughing knife is first presented to its action by turning the hand wheel to the left, to reduce the block to proper diameter. By a reverse movement the roughing department retreats and the finishing knives are brought into service, shaping the hub to desired form and length. The diameter of turning is regulated with graduating screws attached to the carriage, and, when once adjusted, hubs of one diameter are turned to exact sizes without the use of calliper or rule. The hub is roughed, turned, cupped and polished complete at one starting and stopping. The machine is manufactured by the Defiance Machine Works, Defiance, Ohio.

The Markets.

OFFICE MANUFACTURERS' RECORD,
BALTIMORE, June 11, 1890.

A heavier demand and higher prices for pig iron are now anticipated by the leading brokers in New York, Philadelphia, Chicago and St. Louis. On Monday several large contracts for crude iron were closed at Philadelphia at \$15.50 for forge, delivered. Late last week several large transactions were closed at New York on the same basis. In Western cities several large purchases were made of foundry, Bessemer and charcoal iron at full prices. Telegraphic advices are to the effect that large buyers of forge and foundry iron are now ready to close for summer and fall supplies. The effect of this activity has been to stimulate buying among the smaller consumers, who deal in a hand-to-mouth way. Stove manufacturers are credited with having made large purchases, and buyers of No. 1 standard irons have about concluded arrangements for large supplies. Our advices from furnace managers North and South up to present writing clearly indicate that there is a freer movement, not only in irons for early but also for late delivery. The controlling spirits in Tennessee and Alabama have, by their recent actions in the market, made it understood that low prices are past, and that for the present prices will be firm, and for the future there may be an advance. Ohio river valley speculators are now actively endeavoring to close negotiations, which have been pending for some time, looking to the purchase of large supplies for summer and fall delivery. They have been obliged to travel around a good deal in their correspondence to find makers of irons which they want to buy who are willing to sell them on the terms proposed. It is a significant fact just now that large Western buyers, as well as brokers representing buyers, are obliged to scour around all the Southern markets in order to find cheap iron. The Southern iron-makers are showing a bold front, and they will quite probably be rewarded by better prices for doing so. A good many options are now out, which Northern buyers will not be slow to accept.

Bessemer iron is also higher in all markets. Billets and blooms have advanced slightly; at least, asking prices are higher, and mills are full of orders. In Pennsylvania mills muck iron orders have been flowing in quite unexpectedly, the effect of which has been to harden prices. The action of large buyers of plate and structural iron in placing liberal orders for summer and fall has also helped to strengthen prices for heavy material. All of the bridge-builders, locomotive-builders, ship-builders and contractors engaged in elevated railroad work are now looking after supplies for the late summer. Work will be very vigorously prosecuted in all of these directions. Another improving tendency has been shown within the past few days in steel rails. On Monday orders were accepted at Philadelphia for large blocks on a basis of \$31.00. For small lots quotations are \$32.00 to \$32.50. Should an upward tendency set in for blooms and billets, a further advance will likely manifest itself in steel rails. Another interesting feature in the iron trade is the heavy demand for pipe and skelp iron. A great deal of wrought iron pipe is being ordered for the pipe-laying in progress. A great deal more work of this kind is projected. Whether it is reliable news or not, the Standard Oil Co., having purchased four of the largest refineries in the country, are now credited with a scheme for pipe-line building, which, if true, will make them large purchasers of pipe at an early day. A good deal of rolling-mill building is projected in the Southern States, and some heavy contracts have been placed for machinery and equipments.

Nearly all the railroads of the country are now in the market for equipments of one sort or another, especially rolling stock. The effect of all this activity is beginning to be felt in mills supplying raw material, especially steel. What the iron and steel makers are now contemplating is the possibility of an unusually heavy demand for all kinds of mill products. Western markets are particularly active for nails, sheet iron, pipe, barb wire, agricultural implements, etc.

In Eastern markets there is an urgent inquiry for old rails, and tidewater quotations are given this week at \$24. It looks as though June would be almost as active a month in the iron trade as was June of last year.

HARDWARE.

Orders are coming in more freely since our last report, and quite a number of large Southern buyers are on and placing orders for good quantities. There has been a decline of about 20 per cent. on tacks since our last edition, though taking the market as a whole, we think we can report a more satisfactory condition. The price of copper remains unsettled, and manufacturers of copper rivets and burrs have withdrawn all quotations.

AMERICAN PIG IRON Storage Warrant Co.

(Bank of America Building.)

44 Wall Street, NEW YORK.

Correspondence of Furnaces Invited.

NASHVILLE RAPID TANNING AND BELT MANUFACTURING CO.

Manufacturers of Oak Tanned and Rawhide Leather Belting, Lace Leather, Picker Leather, Ropes, Lariats and other Rawhide Leather Goods.

NASHVILLE, TENN.

BELTING Southern Agents—Hoyt's Pure Oak-Tanned Leather Belting, The New York Belting & Packing Co., The Gandy Belting Co. and Excelsior Raw Hide Lace Leather. The largest stock south of New York, assuring prompt shipments. Write for prices.

BAKER, SLOO & CO.
NEW ORLEANS, LA.

DIXON'S

DRY
GRAPHITE
OR
GRAPHITE
GREASE

"are the only things that will keep cool journals on High-Speed Wood-Working Tools." So say many who have tried them.

JOS. DIXON CRUCIBLE CO., JERSEY CITY, N. J.

PICKANDS, MATHER & CO. Pig Iron, Iron Ore and Coal.

Perry-Payne Building,
CLEVELAND, OHIO.

For one dollar, currency or stamps, we will send to any part of the United States, express charges paid, our perfect Grease Cup. It is slight feed, and forces all the grease out of the cup without being touched. We send sufficient grease for trial. The cup is well finished, and is an ornament anywhere. One cup of grease will do the work of six cups of oil. For loose pulleys, crank pins, etc., it has no equal. CHESBROT MFG. CO., Cleveland, Ohio.

EDWARD ALLEN, Practical Lead Burner

BALTIMORE, MD.

Sulphuric Acid Chambers constructed on the latest improved plan. Strict attention given to the Lead Work of Concentrating Apparatus.

P. O. BOX 84. ESTIMATES FOR THE ABOVE GIVEN.

THE JACKSON & WOODIN MFG. CO. Cast Iron Gas and Water Pipe and Castings

OF ALL DESCRIPTIONS.

Berwick, Columbia Co., Pa.
FREIGHT CARS, CAR WHEELS, BAR IRON,
SPECIAL CASTINGS.

Philadelphia × Warehouse × Company,

No. 235 Dock Street, Philadelphia.

CAPITAL, \$1,000,000, FULL PAID.

This Company makes advances upon Pig Iron stored at Furnaces (storage charge being nominal) or in Public Warehouses, upon reasonable terms. Particulars upon Application.

F. M. POTTS,
Sec. and Treas.

R. H. PILE,
Superintendent.

BEAUVEAU BORIE,
Vice-President.

HARRY F. WEST,
President.



The "Original Gandy"

Sewed Cotton Duck Belting,
Especially adapted for Main Drivers, Saw Mills, Cotton Gins, Cotton Presses, and in all places where belts are subjected to moisture or atmospheric changes, the "GANDY" stands paramount.
For further information, prices, etc., write

The Gandy Belting Co.
BALTIMORE, MD.

SOUTHERN AGENTS: Smith & Courtney, Richmond, Va. Atlanta Rubber Co., Atlanta, Ga.
Baker, Sloo & Co., New Orleans, La.

THE BEST & CHEAPEST

BELTING

IN THE WORLD

STITCHED CANVAS BELTING

THE CHESAPEAKE BELTING CO.
BALTIMORE, MD.

PAGE BELTING COMPANY,



SECTION OF COPPER WIRE-SEWED LIGHT DOUBLE BELTING.

We Manufacture all the staple and of Leather Belting, including Also the "HERCULES" Lacing. The Hercules is lacing; combines Raw Hide and of Send for Catalogue Grades of Belting to use.



MADE BY
Page Belting Co.
EXTRA.
FULLY
WARRANTED.



special grades Acme Link and Eureka Dynamo. and the PATNA BRAND Lacing, mechanically made; is a belting of the good qualities of ordinary Page's Patent. Try it. No. 21, describing the "Kinds and for Different Kinds of Work."

CONCORD, N. H., U. S. A.

BRANCHES—Boston, New York, Chicago, St. Louis and San Francisco.

SHULTZ BELTING CO.
MANUFACTURERS OF

IT BELTS THE EARTH AND MAKES THE MOON SPIN LIKE A TOP.

OUR BELTING IS TANNED ON THE SURFACES ONLY. INTERIOR IS RAWHIDE. The only Perfect belt made No shipping or lost mail.

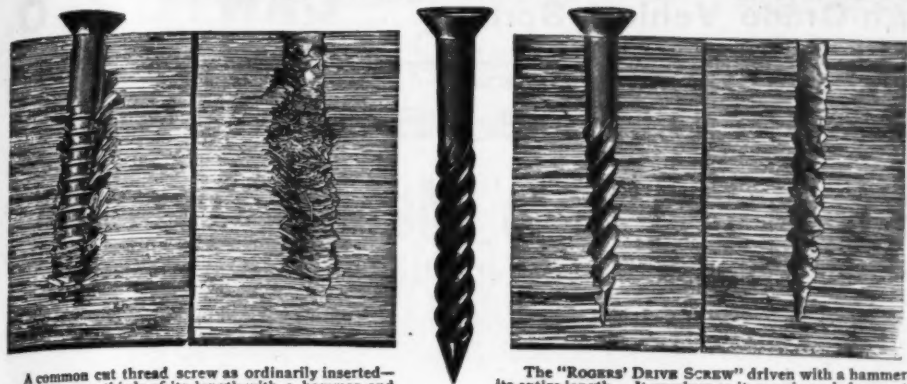
SEND FOR OUR VALUABLE BOOK. FREE.

ST. LOUIS, MO.
—AGENTS IN ALL CITIES—

AMERICAN SCREW CO., PROVIDENCE, R. I.

"ROGERS' DRIVE SCREWS."

Patented May 10, 1887; July 19, 1887;
July 10, 1888. Other patents pending.



A common cut thread screw as ordinarily inserted—i.e., driven two-thirds of its length with a hammer and the balance with a screw driver. Fibres of the wood are necessarily broken, and the holding power of the screw much impaired.

The "ROGERS' DRIVE SCREW" driven with a hammer its entire length. It revolves as it goes in and does not break the fibres of the wood, but makes its own nut of the cavity it forms.

WIER & WILSON, Agents, Baltimore, Md.

The foregoing illustrations speak for themselves, but we call attention to a few advantages of the "ROGERS' DRIVE SCREWS."

1. Stiffness, adapted for driving with a hammer.
2. Rapidity of insertion.
3. Increased holding surface.
4. Ability to be driven with hammer and withdrawn with screw driver numerous times from same hole.
5. Superior head, which will withstand blows of a hammer and not impair the slot.
6. Improved slot, admitting the use of a heavier screw driver.
7. A Rogers' Drive Screw of small diameter will hold as much as a common screw of a larger diameter.

Discount 66 2/3 per cent. from list of common screws.

A Word About Heating and Ventilation of Buildings.

The value of a good indirect heating plant when supplied by forced circulation is difficult to appreciate by those who have not drawn comparisons, or made the subject a study. This system is not an experiment, and is endorsed by the highest authorities on the subject. It is an important step in the direction of sanitary reform for heating factories, mills, schools, theaters, public buildings, &c. The advantages of this system are numerous. It is practicable, convenient, easy of regulation, compact, cleanly and far more economical than any other system. A CONSTANT CURRENT OF WARM, FRESH AIR is evenly distributed to every part of the building, and the air is changed every ten or fifteen minutes. This same system of heating can be made a perfect ventilator, and should be considered by owners and projectors. We are prepared to equip mills complete with this system, and guarantee results. Our HOT BLAST STEAM HEATING APPARATUS costs less than the ordinary method of heating by steam pipes and radiators. Write for catalogue and full particulars.

The AKRON HEATING & VENTILATING CO., Akron, O.



The Akron Improved Hot Blast Heating Apparatus.
As Applied to Factory Buildings.

VAILE & YOUNG'S Patent Metallic Skylights.



309 & 311 NORTH STREET, BALTIMORE, MD.

METAL SKYLIGHTS

Made of galvanized iron and copper. Absolutely no leakage from any source; no dripping or sweating; fire-proof; ventilating. Galvanized iron and copper cornices and gutters. Sheet metal work for buildings. Send for illustrated circular.

E. VAN NOORDEN & CO.,
283 Harrison Ave. BOSTON, Mass.



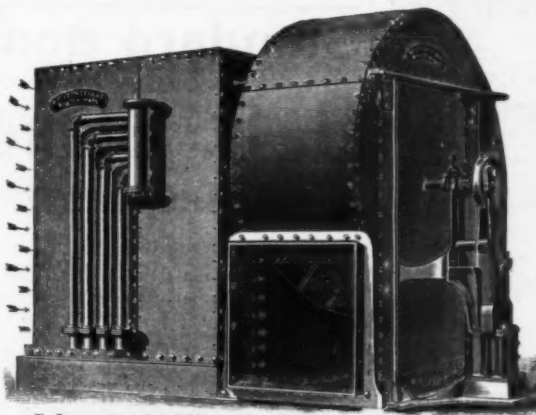
W. B. BUDTON & CO., DETROIT

The Sturtevant Steam Hot Blast Apparatus

—FOR—

Heating AND Ventilating

Public and Office Buildings, Stores and Manufacturing Establishments of all classes, and for drying Wood, Wool, Cotton, Tobacco, Glue, Grain, &c. Send for illustrated treatise on Ventilation and Heating.



Salesroom, 34 Oliver St., Cor. Franklin, Boston.
Branches—91 Liberty Street, New York; 31 N. Canal Street, Chicago.

B. F. STURTEVANT,
BOSTON, MASS.

RICHMOND CITY MILL WORKS, RICHMOND, INDIANA,

—MANUFACTURERS OF—

FLOUR MILL MACHINERY

IN ALL ITS BRANCHES.

A Majority of the Best Flour Mills in the South Equipped by this Company.

CORRESPONDENCE SOLICITED.

BUY Cheapest FROM STEEL WRITE
MANLY MFG. CO., DALTON, GEORGIA. RAILINGS, GATES, POSTS, CRESTINGS, JAILS, ROOFS, STAIRS, Cast Columns, Lintels, Sills, &c. All Latest Improvements. SAW MILLS.

Subscribe to the **MANUFACTURERS' RECORD.** Price \$4.00 a Year,
Or Six Months for \$2.00.



The CANTON SPRING CO.

MANUFACTURERS OF
High-Grade Vehicle Springs
OF EVERY VARIETY.

CANTON, O.

Catalogue on application.

—THE LEADING HOUSE—

H. WM. DOPP & SON,

MANUFACTURERS OF

Soap Makers' and Butchers' Machinery,

462 Ellicott Street, Buffalo, New York, U. S. A.



Swing Foot Lever Soap Presses, Nos. 1 and 2. Combination Foot and Steam Power Soap Presses. Improved Soap Remelting Catchers, either with or without 8 Horse Power Engine attached. Seamless Steam Jacketed Kettles. Steam Jacketed Toilet Soap Kettle, with Agitator (three different styles). Steam Jacketed Rendering and Refining Kettles. Steam Jacketed Kettles for Confectioners.

Improved Lard Dryer, Mixer and Cooler. Steam Jacketed Vacuum Pans. Hotel Kettles for Boiling and Steaming in Hospitals, Institutes, Barracks, Hotels, Asylums, &c., &c. Steam Jacketed Glue Pot Heaters. Iron Soap Cutting Frames, with Adjustable Wires. Soap Dies, for Stamping and Moulding the Soap. Hand Stamps, Steam Traps, with Balanced Valve, &c.

ILLUSTRATED AND DESCRIPTIVE CATALOGUE ON APPLICATION.

MENTION THIS ADVERTISEMENT.



TRADE MARK.

Covert Web Goods, Rope Goods,
Snap and Chain Goods

bear the above TRADE MARK, and are sold by all LEADING JOBBERS at Manufacturers' prices.

Covert Manufacturing Co. West Troy, N. Y.



Enameled Iron French Baths.

HAINES, JONES & CADBURY CO.

HEADQUARTERS FOR

High Class SANITARY GOODS

1136 RIDGE AVENUE,

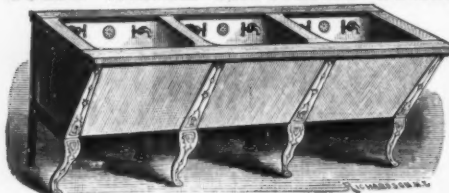
Write for Catalogues. PHILADELPHIA.

STEWART CERAMIC COMPANY,

312 PEARL STREET, Corner Peck Slip, NEW YORK.

SOLE MANUFACTURERS, UNDER MORAHAN'S PATENTS, OF THE CELEBRATED

SOLID WHITE CROCKERY STATIONARY WASH TUBS.



SHOWING THREE TUBS SET SP.
Liberal Terms to the Trade. Send for Price List and Catalogue.

The Only Perfect Sanitary Tubs now in Existence. Very Strong. No Seams to Open. Absolute Cleanliness secured for all time. Well Glazed. Will not Absorb, Leak or Decay. The only Solid White Crockery Wash Tub ever made in the world. Do not buy imitations until you see the genuine "Morahan's Patent" stamped on the front of every Tub. Washboard and Soap Cup moulded in every set. Will outlast any house. Solid White Crockery Tubs. Comprising Butler's Pantry, Kitchen, Shop, Etc. Made of same material as the Tubs. Very strong, well glazed, no labor required to keep clean.

MILNER & KETTIG,



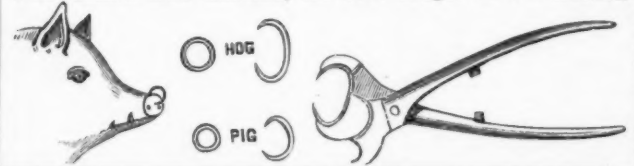
BIRMINGHAM, ALA.

WRITE FOR CATALOGUES AND PRICES.

Prices guaranteed as low as any house in this line in the United States.

Attention, Hardware Dealers.

Send for Circular and Price List of the
WOLVERINE HOG RINGER, the Best Ringer on the Market.



Hog Ringer
Rings
THE WOLVERINE
MANUFACTURED BY
HESTER BROS. & CO., TOWNSHEND, N.H.



THE FRED. J. MEYERS MFG. CO.

COVINGTON, KY., Manufacturers of

WIRE GOODS OF ALL KINDS,

Wrought-Iron Fencing, Cresting and Hardware Specialties.

Send for Illustrated

Catalogue and Price List.

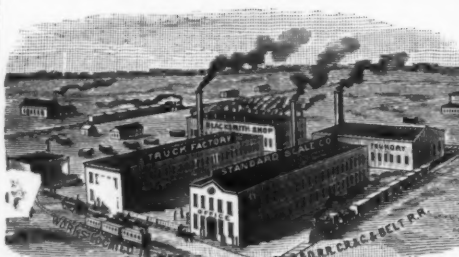


Standard Scale Co., Rome, Ga.

MANUFACTURERS OF

U. S. Standard Scales,

TRUCKS, TESTING MACHINES, &c.



More than 100 varieties of Scales made with the latest and most valuable patented improvements, and adapted to all kinds of business. Our scales are of modern type, superior in finish throughout, and are fully guaranteed.

We make a specialty of
Platform, Wagon and
R. R. Track Scales.

Catalogues, photographs and blue prints furnished on application. Write for price, stating exactly what you want.

MORGAN'S IMPROVED
STEAM AND HOT WATER HEATING BOILERS,

MANUFACTURED BY

THE D. F. MORGAN BOILER COMPANY, AKRON, OHIO.



Points of Superiority.

Being sectional it can be taken into any building. Magazine being surrounded by water surfaces is not liable to burn off, and being in sections can be removed and replaced where ceilings are low.

It is the only return flue boiler having clean-out door, through which the internal fire surfaces may be thoroughly cleaned in five minutes. Each flue for cleaning has a separate stopper, so that there is no escape of dust during the operation.

It will carry steam 12 hours without attention. It will positively do the work it is rated to do. The circulation of steam or water is positive and noiseless. It is thoroughly well made of the best materials. All things considered it is the lowest-priced boiler in the market.

N. B.—The feature of a clean-out door on a return flue boiler is conceded by the most prominent engineers to be of the utmost importance. In fact one of the most important improvements connected with heating boilers.

The Cincinnati Corrugating Co.

Box 226, Piqua, Ohio.

MANUFACTURERS OF

Superior Iron and Steel Roofing

SIDING, CEILINGS, ARCHES, LATH, Etc.

Furnish Light and Heavy Corrugated Galvanized Plates of Special Pattern promptly to order. Correspondence Invited.

HOLTON

IRON ROOFING

CEILING & C.

NEW LISBON, O.

AGENTS WANTED EVERYWHERE

C

CRIMPED

SYKES' IMPROVED

Best Roof in the World. Suitable for all classes of buildings. Easy put on.



SYKES' PATENT

CORRUGATED

All my Iron and Steel is re-rolled and box annealed, well painted on both sides with the Best of Paint and Pure Linseed Oil.

SYKES' IRON ROOFING CO., NILES, OHIO.
Send for Circular and Price List, and mention this paper.

The Kanneberg Roofing Co., Canton, O.

(The Originators of Strictly Genuine Steel Roofing.) MANUFACTURERS OF

THE KANNEBERG PATENT, Latest Improved Folded Lock Seam, Strictly Genuine Steel Roofing.

Write for Catalogue, Price List and Samples.

CORRUGATED IRON, (FOUR SIZES OF CORRUGATIONS.)
Crimped Edge Iron Roofing and Siding, Beaded Iron Siding, and Ceiling, Water Proof, Building Paper, Ready Mixed Paints, Etc.

THE BERGER MANUFACTURING COMPANY, CANTON, O.

SEND FOR CATALOGUE, SAMPLES & PRICES



BERGER'S LOCK SEAM STEEL ROOFING

DON'T

make arrangements for ROOFING 'till you have seen ours.

It Excels all other Metal Roofs.

METAL ROOFING, SIDING AND CEILING.

FIRE-PROOF SHUTTERS AND DOORS.

SHEET IRON AND SHEET STEEL,

Corrugated, Black, Painted & Galvanized.

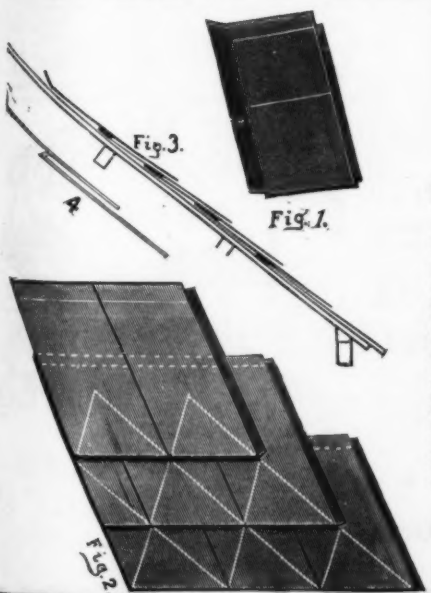
Don't buy without sending for our Prices and Catalogue.

WHEELING CORRUGATING CO., Wheeling, W. Va.

Felt-Lined METAL Shingle.

Tegethoffs' Patent, No. 334,624, dated January 19, 1886.

PATENT FOR SALE.



FIRE-PROOF WATER-PROOF WIND-PROOF GUTTA PERCHA ROOFING!

The Great Roofing for the South. Send for Southern Manufacturers' References. For Steep or Flat Roofs. Factories, Mills, Lumber Sheds, etc. Send for Catalogue, Testimonials, Samples, etc.

Emnre Paint & Roofing Co., 111 N. FOURTH STREET, Philadelphia, Pa.

CAMBRIDGE ROOFING COMPANY, Cambridge, Ohio.

MANUFACTURERS OF

CROWLS PATENT STANDING

SEAM STEEL ROOFING

Plain Rolled, Crimped Edge, Corrugated and Beaded Roofing, Siding and Ceiling.

Pure Steel a Specialty.

Send for Descriptive Catalogue.

LOWE & TUCKER, Chattanooga, Tenn.

—DEALERS IN—

Pig Iron, Iron Roofing,

RAILROAD AND FURNACE SUPPLIES.

DRUID FABRIC ROOFING

The Cheapest, Most Durable and Desirable Roofing Material on the Market.

It is Water-Proof, Weather-Proof, Acid-Proof and practically Fire-Proof. Is endorsed by the New England Mutual Fire Insurance Co.

This roofing is specially recommended to owners of city and country property; it can be applied without the aid of skilled labor. Everyone can be his own roofer at very small cost. We put on this roofing when it is desired.

Druid Elastic Paint

Is the most Elastic, Durable and Economical Paint known for Tin Roofs, Smoke Stacks, Boilers, Boiler Fronts, Bridges and all metal and wood surfaces. It is fire-proof, water-proof and acid-proof; it resists all rust as well as acid and smoke fumes; it will not peel, crack or blister. Especially adapted for making walls and northeast exposures water-proof. Bricks painted with two coats of this compound will resist a water pressure of 200 pounds to the square inch. The same applies to cement and mortar work. Send for prices and further information.

DRUID FELT CO.

7 S. GAY STREET, BALTIMORE, MD.

MANUFACTURERS.

Stevens Patent Spring Dividers | Reliable Inside Calipers.

Ideal, No. 47.

With Thumb Attachment. Price, by mail, postpaid.

3 inch.....	\$1.15
4 ".....	1.40
5 ".....	1.50
6 ".....	1.75

Ideal Surface Gauges, Depth Gauges, Ideal and Leader Spring Dividers and Calipers, and Fine Machinists' Tools.

J. STEVENS ARMS & TOOL CO., P.O. Box 215 Chicopee Falls, Mass.

No. 51.

With right and left hand screw. These Calipers have two tension screws added, thereby removing all back lash, making them perfectly reliable. 3 inch, price per pair\$1.55

TOOLS.

Illustrated catalogue free to all.

THE RICHARDSON WHEEL

THE WALTHAM WHEEL

THE NEW WALTHAM WHEEL

Waltham Emery Wheel Co., WALTHAM, MASS.

By our various processes we can guarantee satisfaction for the greatest variety of work.

EMERY WHEEL MACHINERY, EMERY, CORUNDUM, Etc.

These wheels can be bought of our agents or ordered direct.

Northampton Emery Wheel Co.

MANUFACTURERS OF

Premium Solid Emery

AND CORUNDUM WHEELS,

AND ALL KINDS OF

Emery Wheel Machinery.


LEEDS, MASS.

WESTERN BRANCH:

20 SOUTH CANAL STREET, CHICAGO, ILL.

The Norton Patent Emery & Corundum Wheels

Contain Nothing but Cutting Properties.



Are Free from Dust or Smell.

Will not Glaze or Fill Up.

Are of Great Endurance on Hard Work.

WILL RUN EQUALLY WELL WET OR DRY.

Complete illustrated catalogue mailed free upon application, containing full particulars in regard to

EMERY WHEEL MACHINERY

AND OTHER SPECIALTIES.

THOS. K. CAREY & BROS

Southern Agents, 26 Light St., Baltimore.

SEND FOR CATALOGUE

THE CANTON STEEL ROOFING CO., CANTON, O.

MANUFACTURERS OF

PATENT FOLDED LOCK SEAM STEEL ROOFING, CORRUGATED IRON,

CRIMPED EDGE IRON ROOFING AND SIDING, BEADED IRON SIDING & CEILING, IRON FRAME BUILDINGS, IRON DOORS & SHUTTERS, ROOFING PAINTS, WATER PROOF SHEATHING PAPERS, ETC.

SAMPLES & PRICE LIST.

Eastern Lumber Markets.

[Special Cor. MANUFACTURERS' RECORD.]

NEW YORK, June 11, 1890.

It is sometimes a difficult thing for the practical lumber manufacturer to obtain a clear understanding of the market from reading market reports. The attempt to gather this information on the ground is sometimes as difficult. Dealers here, who are doing business every day, hardly know what opinion to express when called upon. They can only say, "we have sold so much of this, that and the other," or, "we have missed selling this and that, because our neighbor undersold us; we might have sold this and that for a certain price, if the stuff we offered for sale had passed desired inspection." Such remarks as this are very common. The condition of the lumber trade of this city and vicinity can be summarized in about these words:

There is a constant supply, by rail and schooner, of all kinds of lumber which have any market at all here. Large buyers are kept well in hand by wholesalers and retailers, and they are not permitted to be captured by wandering salesmen who may have some particular lot of stock to work off. There is a good demand for all kinds of hardwoods, poplar and quartered oak taking the lead, as usual. As to prices, it is impossible to report any improvement. 1 inch poplar, 10 inches and over, brings \$32; 8 inches \$31; common \$23; sap \$26 and culls \$15.50 in car lots. Retail prices vary considerably from these figures, but the average retail buyer will listen to a good many salesmen before he will pay what he imagines is a high price.

Quartered oak is selling at \$52 to \$55; strips, \$42; 1-inch cherry, \$83; rejects, \$42; black walnut, inch stuff, \$95; rejects, \$50; inch culls, \$35. A great deal of inferior lumber is still coming, and being worked off for the best possible prices. Quartered oak is being sought for wherever it is supposed to be had. Rejects and culls in walnut are meeting with fair demand, because of the steady consumption for cheap furniture. A good deal of cottonwood is arriving, and is worth \$21 to \$22. Receipts of yellow pine have been quite heavy for the past week. Buyers for railroads occasionally make a large purchase. Prices are well maintained. Random orders are quoted at \$21.50; heart faced boards, \$20.50; sidings, \$13.50; flooring, \$21.50. We are working off large quantities of rough and dressed North Carolina pine. Rough 1-inch stock commands \$21, dressed 1-inch flooring, \$22.50 at wholesale. Cypress shingles are in abundant supply, and prices have been crowded down. White pine is arriving pretty freely, and prices are up to about last year's figures. Country orders for sash, doors and blinds are heavy.

At Tonawanda trade is very active, but shipments have been interrupted somewhat by a break in the canal. Boston dealers are doing a heavy business in spruce and Southern pine. Hemlock is in active demand in all sections. Boards command the full list price.

PARTIES LOOKING FOR INVESTMENT

— IN A —

Manufacturing Enterprise

will find it to their interest to investigate concerning an industry located in North Georgia. Has a monopoly in its line of goods for the whole South. Is centrally located as a distributing point. This is an opportunity not often offered for a paying investment. Capital needed, \$20,000. Call on or address **WESS & SALVAGE**, No. 817 Broad Street, Chattanooga, Tenn., or **M. H. V. JONES**, Emerson, Ga.

If you wish to keep posted on the progress of the South, read the MANUFACTURERS' RECORD. Price \$4.00 a year.

THOMAS J. SHRYOCK & CO.
YELLOW PINE COMMISSION MERCHANTS.
Correspondence Solicited.
BALTIMORE AND WASHINGTON.

E. B. HUNTING & CO.
BALTIMORE, MD.
JACKSONVILLE and FERNANDINA, FLA.
and SAVANNAH, GA.

WHOLESALE MERCHANTS
AND MANUFACTURERS OF

Yellow Pine Lumber

Buy for cash on cars at Mills and sell delivered to all points reached by rail or water. Write Baltimore Office.

J. H. WILEY
GADSDEN, ALABAMA.

LARGE BODIES OF

Iron, Coal and Timber Lands
FOR SALE.

Correspondence Solicited.

Carpet A. B. COLLEN,
P. O. Box 490, New York.

Send for Price
List and Catalogue. **Cleaning Machinery.**

Hardware and Gun Trade: Quote our
\$5 Clay Pigeon Trap.

Electrotypes furnished gratis for catalogues.
Liberal commissions. 80-page book free. Address
LIGOWSKY CLAY PIGEON CO. CINCINNATI O.

CORTRIGHT

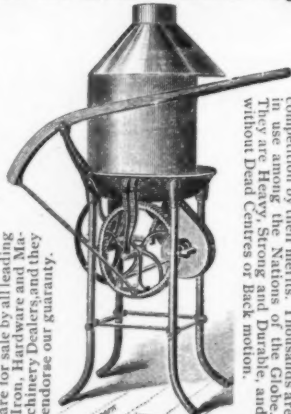


METAL ROOFING, TILES & SLATES



Storm-Proof. Fire-Proof. Durable. Handsome.
Illustrated Catalogue Free.
CORTRIGHT METAL ROOFING CO., Phila.
Western Office, 730 Delaware St., Kansas City, Mo.

"THE BEST IN THE WORLD."
Empire and Western Portable Forges.



These Forges have won their way against competition by their merits. Thousands are in use among the Nations of the Globe. They are Heavy, Strong and Durable, and without Dead Centres or Back motion.

Our Forges and Blowers are for sale by all leading Iron, Hardware and Machinery Dealers, and they endorse our guaranty.

EMPIRE PORTABLE FORGE CO., LANSINGBURGH, N.Y.

JOHNSON, SHRYOCK & CO.
HARDWOOD COMMISSION MERCHANTS.
Correspondence Solicited.
Office, - Shryock Building, BALTIMORE.

F. H. DAVIS & CO.

Dealers in New and Second-Hand

Paper Mill Machinery

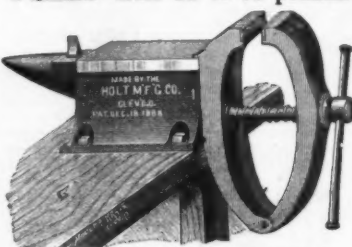
No. 101 Milk Street, Boston.

Gem Spring Hinges.

SINGL AND DOUBLE ACTING. FOR SCREEN, MEDIUM AND HEAVY DOOPS.

FOR DOORS.	Length of Flanges.	Japanese Single Acting.	Double Acting.	Copper Single Acting.	Bronzed Double Acting.
Feet.	Inches.	pr. pair.	pr. pair.	pr. pair.	pr. pair.
6x2	3 1/2	10 1/2	1 40	2 00	3 75
7x2	1 10 1/2	4	0 90	1 75	2 50
7x2 1/2	1 10 1/2	5	1 10	2 30	3 00
7x2 1/2	1 10 1/2	6	1 40	2 80	3 75
8x2 1/2	1 10 1/2	7	1 75	3 50	4 50
8x3	1 10 1/2	8	2 50	5 00	10 50
9x3	1 10 1/2	10	3 50	7 00	14 25
10x3	2 10 1/2	12	4 50	9 00	18 00

MANUFACTURED BY
VAN WAGONER & WILLIAMS CO. New York.
Send for April (1889) Catalogue

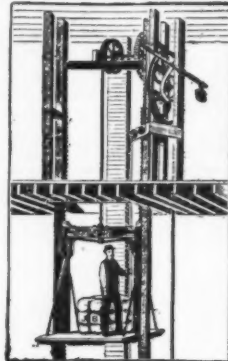
COMBINED ANVIL AND VISE.
HARDENED FACE, STEEL JAWS.
5 SIZES--from 10 to 75 pounds.

Anvil and Vise can be used independent of each other.
Illustrated Catalogue to all applicants, but discount to Trade Only.

HOLT MANUFACTURING CO.
1016 & 1020 First Av., Cleveland, O.
EASTERN AGENTS--MONTGOMERY & Co., 105 Fulton St., New York. WESTERN AGENTS--M. M. BUCK & Co., St. Louis, Mo.
Discount to Trade only.

Bates' Hand Elevators

Pat. April 18, 1871. Reissued July 25, 1876.
OVER 6,000 IN USE.



Adapted for Warehouses, Stores, Factories, Hotels, Public Institutions and every place where merchandise, &c. is transferred from one story to another.

JAMES BATES,
PATENTEE,
Nos. 1, 3 & 5 President Street, BALTIMORE.

The Jeffrey Mfg. Co.
121 W. State St., Columbus, O.
MANUFACTURERS OF
DETACHABLE CHAIN BELTING
DESIGNED FOR
**Elevators, +
Conveyers,
DRIVING BELTS**
For Handling Barrels, Boxes, Bales, Grain, Coal, Ores, &c.
Illustrated 1890 catalogue sent on Application.
Correspondence solicited.

Joyce, Cridland & Co.
DAYTON, O.
MANUFACTURERS OF
J. O. Joyce's Pat. Lever Jack
Compound Lever
AND SCREW JACKS,
And Bench Vises.
50 varieties of Lever and Screw Jacks for railroad use.
Please send for illustr. catalogue.

COTTON SEED OIL MILLS.
From 5 to 50 tons daily capacity.
THESE MILLS HAVE ALL THE MODERN IMPROVEMENTS AND PRODUCE THE MOST SATISFACTORY RESULTS. SEND FOR PARTICULARS.
ADDRESS: **H. W. HUBBARD, ATLANTA GA.**
OR DALLAS, TEX.

GLOBE STANDING SEAM ROOFING & CORRUGATING CO.
CINCINNATI, O.
MANUFACTURERS OF SUPERIOR GRADES

CORRUGATED IRON & STEEL
ROOFINGS SIDINGS AND CEILINGS.
CORRESPONDENCE SOLICITED WITH DEALERS OR THOSE CONTEMPLATING BUILDING.
ESTIMATES AND PRICES FURNISHED PROMPTLY.

RICHMOND IRON PAINT CO.
WEATHERPROOF, WATERPROOF AND FIREPROOF.
Never Cracks, Blisters or Peels. Especially adapted for Tin, Zinc, Copper, Iron, Shingles and Board Roofs.



DAMP AND IMPERFECT WALLS ARE ALSO RENDERED DRY BY THE USE OF THIS PAINT AND CEMENT.
Agents wanted for the State of Maryland and all unclaimed territory in the South.
N. T. PATE & CO., 1007 E. Cary St., Richmond, Va.
Gen. Agency "Vulcan Fire-Proof and Solitaria" Paints.

PURE WATER FROM IRON RUSTLESS PIPES

The best for conveying water.

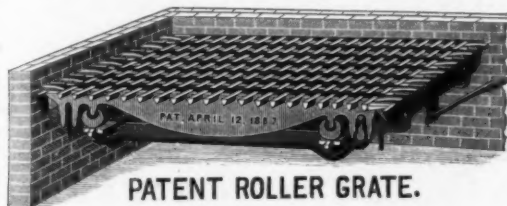
MADE BY THE
WELLS RUSTLESS IRON CO.
52 JOHN STREET,
NEW YORK CITY.

BUY AND SELL Second-hand Saw, State, Heading, Shingle, Hoop Mills, Engines, Rollers, Churn and Ice Machinery, for CASH. Address Box 116, Cleveland Ohio.

Economy in Fuel and Steam.

Economy in the use of fuel and steam is an important consideration in all well-regulated manufacturing establishments. Next to the selection of a competent engineer, the adoption of a first-class fire-grate under the boilers is very essential, if economy in the consumption of fuel is desired.

Few persons, even among skilled engineers, have an adequate conception of the great waste of fuel and heat in generating steam as commonly practiced. A very small per cent.—varying from five to twenty-five per cent.—of the amount of



PATENT ROLLER GRATE.

steam power in coal is utilized for real paying duty.

Perfect combustion of the fuel in the furnace, total transfer of all heat created to the boilers, and the saving for use all steam generated without condensation or loss of heat, are the necessary and most important conditions requisite to economy. To secure these results should be the study and constant aim of every engineer.

Loss of heat and steam once generated is very common by the usual method of "slicing," or cleaning the fires through the furnace doors. By this method much cold and useless air is admitted to the furnace, and the unconsumed carbon escapes up the chimney, and any means that can retain this carbon in the furnace, and combine with it oxygen or air in the right quantity and quality to convert it into free burning gases, will best utilize the fuel, save steam, and thereby actually increase the capacity of the boiler.

To avoid or reduce this waste and loss of steam-power a number of "shaking" or "rocking" grates have been invented, for the purpose of enabling the fireman to clean his fires without opening the doors by shaking the grate with a lever from the outside, thus insuring an even draft, steady combustion, and the largest percentage of real paying duty from a given amount of coal.

One of the latest and best inventions in this line, herewith illustrated in the engraving, is the patent roller-grate, a Boston invention, which, during the short time it has been before the public, has taken high rank, and already has an established reputation among skilled engineers and experts in the use of steam boilers in that city and vicinity, where there are several hundred in use, giving, as we understand, the best of satisfaction.

In several important particulars this grate seems to be a new departure. It is a very simple and practical movement, entirely different from any heretofore brought out. Avoiding all cams, cranks and the sliding of bars on iron, it is so constructed that the whole weight of the grate-bars and fire is supported by and moved on anti-friction roller bearings, so that the largest grates have a positive easy motion, which cannot be clogged with coal or clinkers.

The entire movement is effected by a single bar hung under the front end of grate, upon which bar there is no weight or load. By the rocking or swinging motion of this cross-bar, by means of a hand lever, every grate-bar is set in motion horizontally, but in opposite directions, each to the other on either side, thus agitating every square inch of the grate surface at once, and sifting from the bottom of the fire all obstructions to the draft without wasting any fuel.

The peculiar form of the grate-bars, with raised cross-sections or lugs on their upper surfaces, extending over and beyond either side of a thin, tapering body, permits the placing of the bars any distance apart, the air spaces or openings being governed entirely by the lugs, which may be made large or small to suit the fuel, without changing the distance between or weight of grate-bars. Any percentage of air space required may be obtained without radical change in patterns. This provision for the free circulation of air between, around and under the openings not only promotes combustion, but also preserves the grate-bars and prevents their warping.

A special feature, and one that all engineers will appreciate, is the simplicity of construction, and the fact that this grate can be placed under a boiler without any change of fire-box as quickly and easily as the common bars, there being no bolts, nuts, cranks or fittings of any kind whatever, besides every bar is reversible and all the parts interchangeable. The roller-grate was awarded the medal at the last Massachusetts Charitable Mechanic Exhibition, since which time it has been greatly improved and perfected.

They are manufactured and all rights owned by the New England Roller-Grate Co., 65 Federal street, Boston.—The Safety Valve.

CERTAIN parties who have heretofore secured most of their supplies of iron from Pennsylvania furnaces are said to have purchased 18,000 tons of pig iron, mainly No. 1 foundry, at from \$11.50 to \$12.50 per ton, from the Tennessee Coal, Iron & Railroad Co., of Nashville, Tenn. The order to be filled by the Eneley furnace for June delivery.

THE Southern Investment Co., of 167 Dearborn street, Chicago, Ill., whose advertisement appears in this issue, recognizing the growing importance of the Southern field as against the West, where they have operated very successfully for years, is

transferring its operations to the former. This energetic concern has already located a lively colony of farmers in Tennessee, and is actively engaged in buying and selling Southern stocks, real estate, city and town properties, mineral and timber lands, mines, mills, furnaces, factories, etc. The company solicits correspondence with all interested in the locating, purchase or sale of such properties.

Important to All Corporations.

Every Incorporated Company should USE KAUFFMAN'S Copyrighted Forms of Improved Record Book, Transfer Book, Stock Register, Stock Ledger and other valuable Books. Write for Descriptive Circular. Address

CORPORATION BOOK CO.
P. O. Box 394, Lancaster, Pa.

LUMBER WANTED.

J. C. JONES,

CONTRACTOR AND BUILDER,

BASIC CITY, VA.

WILL NEED ABOUT

1,000,000 Feet

OF
FLOORING, CEILING AND
FINISHING LUMBER.

Refers to Augusta National Bank, of Staunton, Va.; First National Bank, Florence, Ala., and officers of Basic City Mining, Manufacturing & Land Company.

Lumbermen answering this advertisement will please ascertain freight rates to Basic City (formerly Waynesboro Junction), Va.

IF you contemplate starting a new enterprise of any kind, whether it be a railroad, an iron furnace, a rolling mill, a machine shop or foundry, electric-light, water or gas works, saw mill, planing mill, furniture factory, fertilizer factory, cotton mill, or anything else requiring machinery of any description, send particulars to the MANUFACTURERS' RECORD. A postal card giving character of enterprise and kind of machinery wanted will be all that is needed. It will prove of great benefit to you.

The New Griffin Mill

productions are always of uniform fineness.

Send for Descriptive Pamphlet to the

Bradley Fertilizer Co., Boston, Agents.



THE "Auburn" Watchman's Clock.

The best in the market, and the only one combining a system of fire and superintendent's alarm. The most complete safeguard ever invented. No factory can afford to be without it.

SEND FOR CIRCULARS TO

BUNDY MANUFACTURING CO.
BINGHAMTON, N. Y.



S. E. CRAWFORD,
NORWALK, OHIO.

MANUFACTURER OF
Rubber Bucket Chain
And Wood Force Pump Supplies.

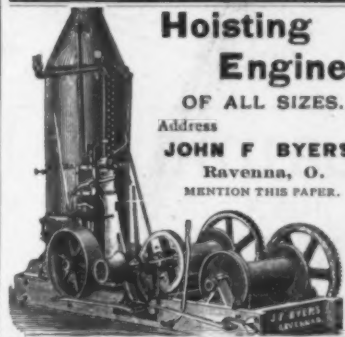
Correspondence Solicited.



THE CHAMBERLIN
Screw Stump Machine.

The only Stump Machine in the world that successfully pulls all classes and sizes of stumps. Write for catalogue and price list.

MANUFACTURED BY THE
CHAMBERLIN MFG. CO.
OLEAN, N. Y.



Hoisting
Engines
OF ALL SIZES.

Address
JOHN F. BYERS,
Ravenna, O.
MENTION THIS PAPER.



INDIANA MACHINE WORKS
FORT WAYNE
INDIANA
BUILDERS OF
WOOD WORKING
MACHINERY.

WRITE FOR DESCRIPTIVE CIRCULARS

MINERALS ON THE FAIRM.

[1890.]

REVISED

POCKET GEOLOGIST
AND
MINERALOGIST,OR
Sixteen Practical Chapters

- I.—Bottom Facts and Bed Rocks.
- II.—The Coal Measures.
- III.—Oil and Gas.
- IV.—Iron and Manganese Ores.
- V.—Gold and Silver Ores.
- VI.—Copper and Tin Ores.
- VII.—Lead and Zinc Ores.
- VIII.—Nickel, Cobalt and Chrome Ores.
- IX.—Antimony, Mercury, Platinum, &c.
- X.—Gems and Precious Stones.
- XI.—Ornamental and Building Stones.
- XII.—Cements and Clays.
- XIII.—Salts and Fertilizers.
- XIV.—Mineral Paints.
- XV.—Grits and Spars.
- XVI.—Other Valuable Minerals.

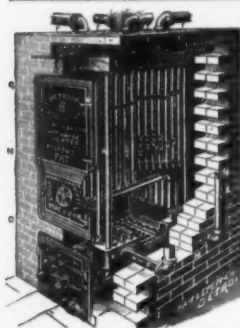
212 Pages—Cloth Bound—Pocket and Flap.

Price One Dollar, post paid.

FREDERICK H. SMITH,
Engineer and Geologist,

237 E. German Street, - - Baltimore, Md.

ADVERTISERS wishing to reach the manufacturers of all classes, mining companies, steel, iron and hardware dealers of the entire South cannot find a better medium than the MANUFACTURERS' RECORD.



BOLTON HOT WATER HEATER.

Best for Warming Dwellings, Greenhouses, Schools, Hospitals, Etc.
Most Economical, Durable and Easily Managed.
Best Record for Years Safe and Cleanly.
of Service in Canada and the Blizzard Northwest.
The Favorite in the Mild Climate of the Gulf States.
Its Vertical Circulation renders its action prompt and rapid. Its Fire Surface is the largest in proportion to grate surface.
No Bolted, Flanged or Packed Joints, therefore cannot leak. Its Brick Casing prevents loss of heat in cellar.
Made of Wrought Iron, therefore cannot crack.

DETROIT HEATING & LIGHTING CO.
28 Lake Street, CHICAGO. 359 Wight Street, DETROIT.

SEND FOR CIRCULARS.

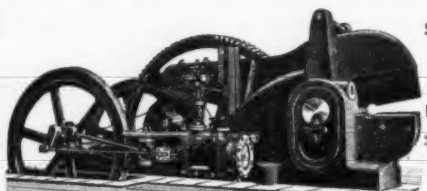
STANDARD RADIATORS,
ALL SIZES.
Discounts to the Trade.



COMBINATION GAS MACHINE.
BEST INDEPENDENT GAS APPARATUS
for Country and Suburban Residence.
Churches, Schools, Stores, Hotels, &c.
Over 20 years in use with never an accident.
Average Cost of Gas 1/2 Cent per Hour per Burner.

The LLOYD BOOTH CO., Youngstown, Ohio.

GUIDE,
BAR,
MUCK,
SHEET
AND PLATE
MILLS.



SQUEEZERS,
SHEARS,
ORE MILLS,
ROLL LATHES,
SAND AND
CHILL ROLLS.

Manufacturers of IRON AND STEEL WORKS MACHINERY.



**No Plus Ultra
STEEL
Wheelbarrows,**
GRANT McNEIL,
142 N. Main Street,
AKRON, O.

Laundry Machinery:

LARGEST STOCK. LATEST IMPROVEMENTS. FULLEST LINE.

Washing Machines,
Ironing Machines,
Centrifugal Machines,
Mangles, Wringers, &c.
BOILERS AND ENGINES.

OUTFITS FOR
Hotels and Public Institutions.

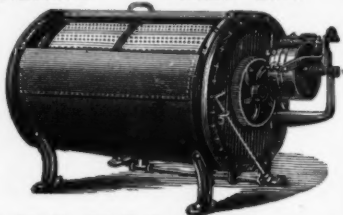
A SPECIALTY.

THE A. M. DOLPH CO.

222 WASHINGTON STREET,
CHICAGO, ILL.

40 CORTLANDT STREET,
NEW YORK.

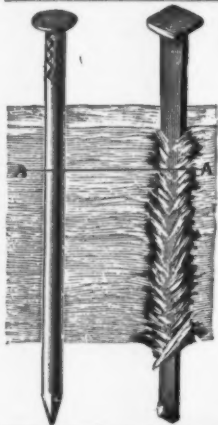
COR. 9TH ST. & FREEMAN AVE.
CINCINNATI, O.



Castle Automatic Absorption Ice Machine.

Uses but 210 degrees of heat in the retort, saving all the water for cooling the gas and the weak liquor from 320 degrees down to 210 degrees, and uses none for the absorber. Small machines are complete on heavy-cast foundation plate. Automatic in operation. **Warranted High-Class and Positive.** Hotels, creameries, &c., can make their own ice or refrigerate without additional help. Sizes 500 pounds to 10 tons per 24 hours.

CASTLE ENGINE WORKS, Indianapolis, Ind.



The SALEM WIRE NAIL CO.
MANUFACTURERS
Wire Nails

Works: SALEM, O.; FINDLAY, O.

General Office: SALEM, OHIO.

BRANCH OFFICES:

261 Broadway, New York.

209 Phenix Bldg., Chicago.

123 Souard Street, St. Louis. 4 Wiggins Block, Cincinnati.

John L. Whiting,
Wm. S. Whiting,
Lew C. Hill.

JOHN L. WHITING & SON,

MANUFACTURERS OF

BRUSHES

Cor. High and Purchase Sts.

BOSTON, U. S. A.



Niagara Stamping & Tool Co.

MANUFACTURERS OF

TINNERS' MACHINES and TOOLS,

Squaring Shears, Press Dies, &c.

FOR WORKING SHEET METAL.

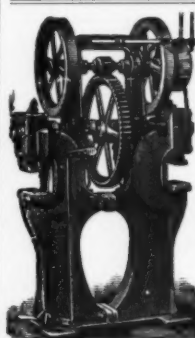
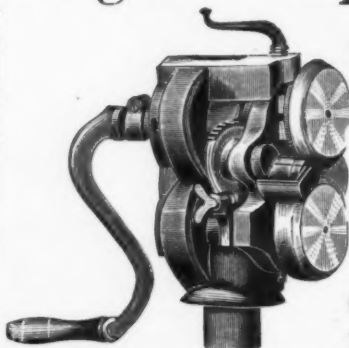
Fruit Can Dies and Tools.

CANNERS' OUTFITS.

OFFICE AND WORKS:

Cor. Randall & Superior Sts., Buffalo, N. Y.

Write for catalogue and price-list, and mention this paper.



Small Double Machine.

**THE
Long & Allstatter Co.**
HAMILTON, OHIO.

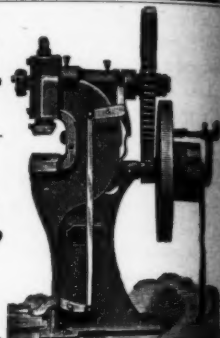
Double, Single, Angle-Bar, Gang, Horizontal, Twin, Boiler, Spacing,
Gate, Multiple, BELT and
STEAM-DRIVEN

Punches and Shears,

Over 300 Sizes.

ALSO
**POWER CUSHIONED
HAMMER.**

Send for New Catalogues.



Small Single Machine.

Wm. Baragwanath & Son

FEED WATER HEATING

PURIFYING APPARATUS

48-50 & 52
W. Division St.
CHICAGO
ILL.

Adam
Adam
Akro
Alger
Allen
Allen
Amer
Amer
Amer
 ran
Amer
Amer
Amer
Amer
Ann
Arcti
Arms
Arno
Asht
A. T.
Atlan
Ault

[illegible]

Cald
Cald
Call
Cam
Cam
Cam
Cam
Can
Can
Car
Car
Car
Car
Car
Cas
Cas
Ch
Cha
Cha
Cha
Cha
Cha
Che
Che
Ch
Ch
Ch
Ch
Ch
Cl
Cl
Cl
Cl
Cle
Cle
Cle
Cle
Rat
Cle
Cobb
Coe
Col
Coll
Conn
Conn
Cons
Cook
Cop
Core
Corr
Corp
Cover
Craw
Cresc
Crom
Cros

Alphabetical Index of Advertisers.

[FOR "CLASSIFIED INDEX," SEE PAGE 2.]

A	
Adams, Austin	51
Adams, S. & Sons	51
Akron Heating & Vent. Co.	67
Alcott, T. C. & Son	67
Allen, Edw.	67
Allentown Fdry & Mach. Co.	61
American Gas Saving Co.	51
American Pig Iron Storage Warehouse Co.	28
American Pipe Mfg. Co.	66
American Screw Co.	66
American Supply Co.	75
American Wool Reporter	37
Armstrong Bros.	31
Arnold, D. J. C.	28
Ashton Valve Co.	31
A. T. & S. F. R. Co.	28
Atlanta Machine Works	57
Aut & Wiborg	58
B	
Babcock & Wilcox Co.	28
Baker, Sio & Co.	66
Baldwin Locomotive Works	66
Baltimore Stor. & Light. Co.	59
Barnes, Wm. & Son	72
Barnes, Geo. A.	64
Barnes, W. F. & John, Co.	61
Barr Pumping Engine Co.	36
Berry, W. B., Saw and Supply Co.	26
Best City, Va.	32
Bates, Jas.	39
Bay Line	43
Beach, H. L.	48
Beattie, C. J.	36
Beecher & Peck	62
Bedford City Land & Imp. Co.	23
Bedden Machine Co.	73
Berger Mfg. Co.	69
Bessemer, Ala.	56
Richford Drill Co.	56
Big Stone Gap, Va.	32
Birdall Co.	29
Blake Mfg. Co., The Geo. F.	26
Blakeslee Mfg. Co.	26
Blymeyer Iron Works Co.	46
Boggs & Clarke	46
Boomer & Boschert Press Co., The	43
Boston, A. F. & Co.	57
Box, R. Raleigh	43
Box, C. Cleveland	70
Bradley Fertilizer Co.	71
Bradley & Co.	63
Bradstreet Co.	59
Brown Bros. & Co.	74
Brown, Alex. & Sons	36
Brown Electric Co.	76
Budden & Son	58
Buffalo Forge Co.	76
Buffalo Scale Co.	3
Buffalo Steam Pump Co.	26
Bufflock, M. C., Mfg. Co.	61
Bundy Mfg. Co.	70
Burgess, W. R.	74
Burton, W. J. & Co.	67
Bushby, Joe H.	44
Bushnell, G. H., Co.	54
Byers, Jno.	71
Byram & Co.	52
C	
Caldwell, C. H., Prest.	43
Caldwell, H. W. & Son	3
Callahan, W. P. & Co.	74
Cambridge, Va.	54
Cambridge Roofing Co.	69
Cameron, A. S., Steam Pump Wks	37
Campbell Cotton Compress Co.	37
Campbell & Zell Co.	37
Canning, Reginald & Co.	46
Canton Saw Co.	48
Canton Spring Co.	68
Canton Steel Roofing Co.	69
Cardell, Jas. D. & Co.	27
Cardell, Tenn.	13
Cardwell Machine Co.	43
Carey, Thos. K. & Bros.	62
Carlisle Mfg. Co.	66
Carter, Jno. S.	64
Cas Mfg. Co.	64
Casby & Co.	62
Casle Engine Works	72
C. H. & D. R. R.	59
Chamberlin Mfg. Co.	71
Chambers Brothers Co.	28
Chandler & Taylor	29
Chapman, F. J.	44
Charter Gas Eng. Co.	44
Chattanooga Fdry. & Pipe Wks.	47
Chattanooga Saw Works	34
Chattanooga Paint Co.	34
Chattanooga Wood Split Pulley Co.	34
Cheney & Hewlett	44
Chesapeake Belting Co.	66
Chester Steel Castings Co.	63
C. M. & St. P. Ry.	59
C. & C. R. Co.	59
Chicago Raw Hide Mfg. Co.	76
Chickasaw Iron Works	46
Child, O. W. & Co.	46
Christiana Mch. Co.	69
Cincinnati Corrugating Co.	69
Clark, Geo. P.	69
Clark, Jeremiah	43
Clark, W. J. & Co.	61
Cleveland Axle Mfg. Co.	76
Cleveland Gas Machine Co.	51
Cleveland & Hardwick	59
Cleveland, Leraim & Wheeling Railroad	59
Cleveland Twist Drill Co.	59
Cobb, Thaddeus S. & Co.	76
Coe & Wilkes	70
Collier, A. B.	70
Collins, Victor	52
Connell & Dengler	4
Consolidated Ice Machine Co.	57
Contractors' Plant Mfg. Co.	61
Cook Well Co.	26
Copeland & Bacon	61
Cordesman, Meyer & Co.	48
Cory Car & Mfg. Co.	34
Corporation Book Co.	71
Cortright Metal Roofing Co.	70
Cover Mfg. Co.	58
Crawford, S. E.	71
Crescent Manufacturing Co.	66
Crompton Loom Works	74
Cronk Hanger Co.	6

Curtis Regulator Co.	31
Cyclops Steel Works	57
D	
Dallas, Texas	33
Davis, F. H. & Co.	70
Dean Bros. Steam Pump Works	26
Deane Steam Pump Co.	4
Defiance Machine Works	59
Denison, Texas	19
Derby & Kilmer Desk Co.	37
Detroit & Cleveland Stm. Nav. Co.	39
Detroit Elbow Co.	51
Detroit Foundry Equipment Co.	93
Detroit Heating & Lighting Co.	72
Diamond Prospecting Co.	60
Dietz, Bernhard	64
Dixon, Henry & Sons	49
Dixon, Jos. Crucible Co.	66
Dolph, A. M., Co.	68
Dopp, H. Wm. & Son	72
Draper, Geo. & Sons	45
Drew, Baldwin & Co.	43
Druif Felt Co.	69
Dufur & Co.	64
Dunning, W. D.	43
Du Quoin Iron Works	43
Dyott & Co.	62
E	
Earle, T. K., Mfg. Co.	74
Eastman Co.	36
Eclipse Pump Mfg. Co.	27
Edwards City Brass Works	57
Eddy, Chas. G.	37
Edmonds & Robinson	33
Edmonds, Elias	59
Egan Co., The	59
Ehret-Warren Mfg. Co.	34
Empire Paint & Roofing Co.	69
Empire Portable Forge Co.	70
Employers' Liability Assurance Corporation (Limited)	37
Equitable Mortgage Co.	37
Estep, F. A.	46
E. T. V. & G. Ry.	59
Evans Friction Cone Co.	6
F	
Fay, J. A. & Co.	49
F. G. Co.	43
Field, Jno. C.	43
Fitzsimons & Co.	74
Fletcher & Thomas	28
Florence, Ala.	15
Forester City Brass Works	57
Forsyth, S. C., Machine Co.	43
Foundry & Machine Department	30
Harrisburg Car Mfg. Co.	43
Frank & Co.	28
Frey-Sheckler Co.	28
Frick Co.	29
Friskies Lucop Mill Co.	61
Fritz, Geo. J.	76
Fulton Iron & Engine Works	76
G	
Gambrell, C. A., Mfg. Co.	59
Gandy Belting Co.	66
Gates Iron Works	60
Gerlach, Peter & Co.	48
Giles, D. C.	43
Glamorgan Co., The	27
Glasgow, Va.	74
Glen Cove Machine Co., (Lim.)	48
Globe Machine Co.	70
Globe Iron Roofing & Cor. Co.	70
Globe Machine Works	46
Goodfry & Co., L.	46
Goodell & Waters	37
Goodhart, P. J. & Co.	37
Gordon Steam Pump Co.	18
Gordon, Strobel & Laurean (Lim.)	74
Goulds Mfg. Co.	34
Graham, J. S. & Co.	25
Graham, Va.	25
Gray & Fitch	43
Greene & Wood Mfg. Co.	74
Gump, A. W. & Co.	64
H	
Haines, Jones & Cadbury Co.	68
Harrington, E., Son & Co.	61
Harrington & King Perforat. Co.	61
Harris, N. W. & Co.	29
Harris, Wm. A., Steam Eng. Co.	29
Harrison Safety Boiler Works	47
Hartford Steam Boiler Inspection & Insurance Co.	58
Hartman & Durstine	52
Heesen Bros. & Co.	68
Hercules Iron Works	43
Heiser Safety Boiler Co.	43
Heiser Electric Light Co.	51
Hewes & Phillips Iron Works	29
Hill Clutch Works	48
Hill, Wm. E. & Co.	48
Holmes, E. & B.	64
Holt Mfg. Co.	70
Holton Iron Roofing Co.	60
Hoopes & Townsend	63
Hoover, J. A.	44
Hoppe Mfg. Co.	21
Hotel Fairmount	58
Hotel Lucerne	44
Houchin, A. W.	64
Hubbard, H. W.	70
Hughes Steam Pump Co.	53
Hunting, E. B. & Co.	70
Hunt, Rodney, Machine Co.	6
I	
Indiana Machine Works	71
Industrial Light Co.	51
Industry File Works	64
Ingersoll-Sergeant Rock Drill Co.	3
Iron Clad Paint Co.	30
J	
Jackson & Woodin Mfg. Co.	66
Jacksonville, Ala.	21
Janney & Wickersham	6
Jarvis Engineering Co.	28
Jeffrey Mfg. Co.	64
Jenkins Bros.	76
Johns, H. W. Mfg. Co.	64
Johnson, R. M.	64
Johnson, Shryock & Co.	70
Jones, H. M. V.	70
Jones, J. C.	71
Jones of Birmingham	64
Jory & Co.	43
Joyce, Cridland & Co.	70
K	
Kanneberg Roofing Co.	69
Keegan & Halpin	51

Kendall, Edward & Sons	46
Kilbourne & Jacobs Mfg. Co.	76
Kimball, Tenn.	33
Knoxville Car Wheel Co.	68
L	
Ladd, Alfred W.	46
Laidlaw & Dunn Co.	26
Lancaster Turbine Wheel Co.	52
Lathe & Morse Tool Co.	63
Leffel, Jas. & Co.	44
Ligovsky Clay Pigeon Co.	70
Lincoln Iron Works	60
Link Belt Engineering Co.	61
Litton Mfg. Co.	31
Lloyd Booth Co.	72
Lockwood, Greene & Co.	43
Lockwood Mfg. Co.	31
Long & Davis Mach. Tool Co.	76
Long & Allattier Co.	72
Longwood Land & Imp. Co.	33
Lowell Tuckey	69
Lowell Steam Boiler Works Co.	64
Ludlow Saylor Wire Co.	51
Ludlow Valve Mfg. Co.	51
M	
Mackinnon, J. A., Mach'y Co.	46
Mackeapack, C. R. & Co.	43
Males, A. S. & Co.	43
Manly Manufacturing Co.	67
Manor, Chas. E.	43
Maslin, Jno. & Son	26
Mason Regulator Co.	64
Mather Foss & Co.	26
Mather Electric Co.	46
Menasha Wood Split Pulley Co.	57
McFarland, Jno. D.	26
McGowan, Jno. H. Co.	26
McLanahan & Stone	61
McNeill, Grant	72
McShane, H. & Co.	44
Merchant & Co.	64
Merritt, E. C., Machinery Co.	46
Mey, F. H. Co.	68
Meyers, Fred. J. Mfg. Co.	37
Middendorf, Oliver & Co.	37
Middleborough, Ky.	14
Miller & Bierce	34
Miller Safe & Iron Works	76
Miner & Kettig	68
Mininger, Wm.	46
Moore, F. H.	46
Moore & White Co., The	57
Morgan, D. F., Boiler Co.	68
Morris County Machine Co.	34
Morris Machine Works	52
Morse, Williams & Co.	3
Munroe, E. & Son	48
Murray & Stevenson	45
Murray, Jas. & Son	46
N	
Nashville Rapid Tanning & Belt Manufacturing Co.	66
National Pulley Covering Co.	46
National Typewriter Co.	73
New Doty Mfg. Co.	73
New England Roller Grate Co.	34
New York Equipment Co.	46
New York Machinery Depot	46
Nichols & Co., Tool Co.	72
Nichols & Waterman Mfg. Co.	72
Nicholson File Co.	43
Nier, Hartford & Mitchell	43
Niles Tool Works	28
Nolan, Madden & Co.	45
Nordyke & Marmen Co.	45
Norfolk, Va.	74
North American Metaline Co.	74
Northampton Emery Wheel Co.	69
Norton Emery Wheel Co.	69
N. C. Steel & Iron Co.	24
Noye, John T. Mfg. Co.	51
Nubian Iron Enamel Co.	51
O	
Old Kentucky Route	59
Olney Bros.	74
Otteu & Westenhoff	43
Otto Gas Engine Works	4
P	
Page Belting Co.	66
Palmer, Cunningham & Co. (Lim.)	64
Palmer, J. E. & Co.	37
Pancost & Maule	69
Pate, N. T. & Co.	70
Payne, B. W. & Sons	29
Penfield, J. W. & Son	28
Penna. Globe Gas L. Co.	52
Pennsylvania Steel Co.	62
Phila. Warehouse Co.	66
Phoenix Iron Works	66
Phosphor-Bronze Smt. Co. (Lim.)	63
Pickands, Mather & Co.	66
Piedmont Air Line	59
Pittsburgh Bridge Co.	34
Place, George	46
Porter, H. K. & Co.	62
Porter Mfg. Co.	29
Potomac Bridge Wks.	34
Powell, A. C. & Son	64
Powell & Lockwood	64
Pratt, J. H.	43
Preble Machine Works Co.	46
Prentiss Tool & Supply Co.	46
Przybil, F.	49
Pulsometer Steam Pump Co.	47
R	
Rader, Coffin & Crocker	43
Randel, Frank	69
Rand Drill Co.	73
Rarg & Co., Alex. K.	29
Raymond, C. W. & Co.	28
Record Printing House	30
Reliance Gauge Co.	30
Rhomer, Frank & Co.	74
Rice & Whitacre Mfg. Co.	30
Richardson, W. A. & Co.	74
Richmond City Mill Works	67
Richmond Locomotive & Machine Works	47
Richmond Machine Works	62
Richie Bros.	49
Ring Refrig. & Ice Machine Co.	57
Roane Iron Co.	56
Robertson, W. A. R.	45
Robinson, Wm. C. & Son	63
Robinson & Orr	3
Rochester Machine Tool works	30
Rogers, C. B. & Co.	48
Rome Foundry & Machine Wks.	52
Ross, Josiah	6
Rouse, R. K.	6

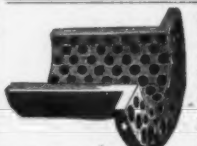
Rowley & Hermance	48
Rumsey & Co., Limited	76
Russell & Foundry Co.	44
Russell Wheel & Foundry Co.	44
Ryan Co., Jno.	58
Ryan-McDonald Mfg. Co.	61
Ryder & Dearth	58
S	
Salem Fdry. & Mch. Shop	44
Salem Wire Nail Co.	72
Santley, W. R. & Co.	64
Saunders, D. Sons	44
Scanlan, G. H. & Co.	48
Schamm & Uhlinger	74
Sebastian-May Co.	47
Seyfert, L. F.	46
Shelton, E. DeF.	44
Shenandoah Valley Railroad	59
Shepard, H. L.	64
Sherwood Mfg. Co.	30
Shields & Brown Co.	30
Shimer, Samuel, J. & Co.	70
Shryock, Thos. J. & Co.	70
Simpkin & Hilmyer	47
Skinner Engine Co.	30
Smith, Fred. H.	71
Smith, H. B., Machine Co.	49
Smith, S. Morgan	52
Smith & Vaile Co.	26
Snodden & Atlee	46
So. Electrical Supply Co.	3
Southern Equipment Co.	43
Southern Ry. Construction Co.	37
Southern Investment Co.	37
Spiral Weld Tube Co.	37
Springfield Emery Wheel Mfg. Co.	64
Standard Dry Kiln Co.	39
Standard Land Co.	45
Standard Scale Co.	68
Standard Steel Works	46
Standard Tool Co.	76
Starr, B. F. & Co.	50
Stauden, Va.	17
Steam Stone Cutter Co.	73
Stedman's Fdry. & Mch. Wks.	73
Steel Rail Supply Co.	43
Stein & Schwarz	43
Stevens, J., Arms & Tool Co.	69
Stevenson & Co.	28
Stewart Ceramic Co.	58
Stillman House	58
Stillwell & Bierce	48
Stow Flexible Shaft Co.	48
Stuebner & Woods	64
Sturtevant, B. F.	67
Sulzer-Vogt Machine Co.	6
Sumter, S. C.	56
Superior Machine Co.	26
Sword, F. L. & Son	46
Sykes Iron Roofing Co.	69
T	
Talbot & Sons	30
Taper-Sleeve Pulley Works	64
Taylor, Frederic, & Co.	37
Taylor Mfg. Co.	29
Terry Mfg. Co.	30
Thomson-Houston Electric Co.	73
Tift, Geo. W. Sons & Co.	29
Tredgair, Ala.	21
Trevor Mfg. Co.	52
Tudor Boiler Mfg. Co.	31
U	
Union Brass Foundry	61
Union Drawn Steel Co.	62
United Edison Manufacturing Co.	62
V	
Vaile & Young	76
Vaik & Murdoch Iron Works	30
Valley Iron Works	29
Valley Pump Co.	26
Valley Railway	59
Van Duzen & Tift	26
Van Duzen Gas & Gasoline Eng.	44
Van Noorden, E. & Co.	67
Van Nuis, C. B.	43
Van Wagoner & Williams Co.	70

T.K. EARLE MFG. CO.

 PATENT
 NEEDLE POINT
CARD CLOTHING.
 AND ALL OTHER VARIETIES
 WORCESTER, MASS.

OLNEY BROTHERS,
 N. E. Agents for
 Binghamton Cylinder & Spindle
 AND DEALERS IN
 Sperm, Lard, German, **OILS**
 Spindle and Wool
 140 CONGRESS ST., BOSTON, MASS.

Bobbins, Spools, Shuttles,
 AND ALL MANUFACTURERS' WOOD SUPPLIES
 AND SPECIALTIES IN MILL TRADE.
The GREENE & WOOD MFG. CO.
 NEW BEDFORD, MASS.



North American Metal Co., 37 Bleeker St., N.Y. City.

OILLESS BEARINGS.
 They will run for years
 without oil. Perfectly
 clean. No cutting or
 danger of fire from
 overheating. Send for
 New Circular of interest
 to users of Loose
 Pulleys.

BROWN BROS. & CO.
 Manufacturers and Dealers.
General Cotton Mill Furnishers.
 Fitting out of New Mills a Specialty.
 PROVIDENCE, R. I.

W. A. RICHARDSON & CO.
 MANUFACTURERS OF STANDARD MEASURING
CLOTH FOLDERS AND COTTON WINDERS,
 For Print and Dye Works, Bleacheries, Cotton, Gingham, Delaine Mills, Etc.
 P. O. Box 584. **WORCESTER, MASS.**

ROMPTON 1888 WOOL COMBS.
CROMPTON LOOM WORKS.
 WORCESTER, MASS.
 COTTON, WOOLEN, SILK,
 TAPE & CARPET LOOMS.

JACQUARD MACHINES.

We make a specialty of furnishing Jacquard Machines with harnesses already tied up, ready to draw in the warps. Also designs and cards. Send for estimates.

SCHAUM & UHLINGER,
 Successors to W. P. UHLINGER,
 Greenwood Avenue and Second Street, Philadelphia, Pa.

Cotton and Woolen Mill Supplies.

WATERS & GARLAND,

433 Main Street,

LOUISVILLE, KY.

Bobbins, Shuttles, Card Clothing, Roller Cloth, Dyestuffs,
 Sheep, Calf and Lamb Roller Skins, Ring Travelers, Reeds,
 Heddles, Banding, Tape, Lace Leather, Belting, Oils, etc.
 Write for Discounts.

VAN WINKLE GIN & MACHINERY CO.

ATLANTA, GA., and DALLAS, TEX.

MANUFACTURERS OF

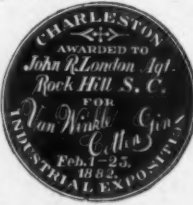


COTTON GINS, FEEDERS,

CONDENSERS AND PRESSES,

COTTON-SEED OIL MILLS,

SHAFTING, PULLEYS, WIND MILLS, TANKS, PUMPS, Etc.



COLD **FITZSIMONS & CO.** **IRON**
 DRAWN **SHAFTING** **STEEL**
 CLEVELAND, OHIO.

Subscribe to the **MANUFACTURERS' RECORD**
 Price \$4.00 a year or 6 months for \$2.00.

The BEST COTTON-SEED OIL PRESS IN THE MARKET

Boxes Made Entirely of Steel.

CAPACITY:

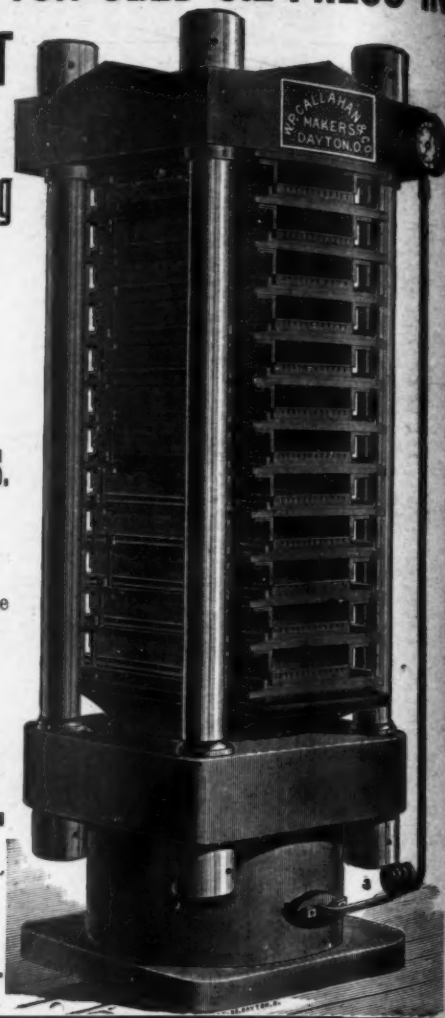
12 Tons in 24 Hours.

Parties contemplating the
 erection of Cotton-Seed
 Mills should
 address

W. P. Callahan & Co.

DAYTON,

OHIO.



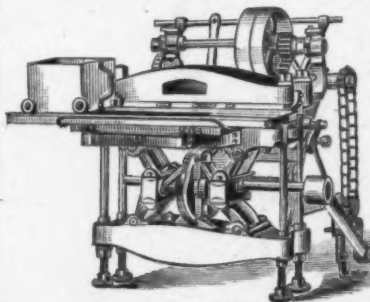
OIL MILL MACHINERY.

THE G. H. BUSHNELL CO.

Thompsonville, Conn.

MANUFACTURERS OF

Improved Cushing Rolls, Meal
 Heaters, Cake Formers, Hy-
 draulic Presses, Belt Driven
 and Steam Hydraulic
 Pumps, Etc.



Cake Former or Moulding Press.

Parties having in contemplation the building
 or refitting of Oil Mills will do well to send for
 our circulars and prices.

W. R. BURGESS, Southern Representative.

IMPROVED WHEELLOCK ENGINE.

COMPLETE STEAM POWER PLANTS

For Cotton Mills, Electric-Light Plants and All Purposes Where
 Durability and Economy of Steam is Important.

The Wheellock Engine has many advantages not possible to any other engine.
 Heating and Ventilation of Cotton Mills, Drying Lumber, Brick, Pottery, &c., by the
 Sturtevant System. Everything for Saw Mills, Planing Mills, Brick-Making, &c
 Correspondence solicited.

GREENSBORO, N. C.



FRANK RHONER & CO.

MANUFACTURERS OF

Parlor and Hall Furniture

Call and See Our Stylish Goods at Popular Prices.
 Call and See Our Goods in Gilt and Old Silver.

WAREHOUSE: 437 E. 22d ST., NEW YORK, bet. Ave. A and First Ave.

AMERICAN SUPPLY CO.

Formerly MYRON, FISH & CO., of Valley Falls, R. I., and KENDRICK, LOOM HARNESS CO., of Providence, R. I.

MANUFACTURERS OF

LOOM HARNESS AND REEDS

OAK BELTING, LACE AND PICKER LEATHER,

And Dealers in Supplies for Cotton, Woolen and Silk Mills.

Agents for JOSEPH NOONE'S SONS,
Roller, Slasher and Clearing Cloths.

Agents for —
Roddick's Patent Improved Oil Cans.

Calf, Sheep and Lamb Roller Skins and

ROLL COVERS' TOOLS.



WIRE GOODS OF ALL DESCRIPTIONS.

AND
WIRE HEDDLES

Shuttles and Heddle Frames,

FOR FURNISHING

We Have Unequalled Facilities

SPECIAL NOTICE TO WORSTED AND SILK MILLS.—We manufacture both Worsted and Cotton Machine-Knit Mall Harness for Weaving Fine Worsted and Silk Goods. Also a full line of Supplies for Jacquard Looms.

Office and Salesrooms, 10 Exchange Place, PROVIDENCE, R. I. **PROVIDENCE and VALLEY FALLS, R. I.**

FACTORIES:

A. D. LOCKWOOD, Prest.

JOHN KENDRICK, V.-Prest.

MYRON FISH, Treas.

JOHN A. CARTER, Secty.

JOSEPH H. KENDRICK, Gen. Agent.

The Problem of Long Distance Incandescent Lighting

COMPLETELY SOLVED BY THE USE OF THE

Thomson-Houston Alternating Current Apparatus.

Unlike those of other makes, the Thomson-Houston Dynamos are perfectly self-regulating under extreme changes in the number of lamps. By a system of ventilation peculiar to this machine all danger of burning out of armature is completely obviated. The standard dynamos are made for operating 650, 1,300 or 2,600 16 c. p. lamps.

ILLUSTRATED CATALOGUES UPON APPLICATION.

THE THOMSON-HOUSTON ELECTRIC CO.

620 Atlantic Avenue, BOSTON, MASS.

148 Michigan Avenue, CHICAGO, ILL.

Wall and Loyd Streets, ATLANTA, GA

403-405 Sibley St., ST. PAUL, MINN.

BUY THE BRUSH

Then you will have the best of all

Electric ★ Apparatus

Write immediately for a catalogue regarding

Arc AND Incandescence, BRUSH LIGHTS AND MOTORS.

The Brush Electric Co.

CLEVELAND, O.

CHICKASAW IRON WORKS,

JOHN E. RANDLE & CO., Prop'rs,
MEMPHIS, TENN.



MANUFACTURERS OF
Architectural Iron Work,

IRON AND BRASS CASTINGS.

LOCOMOTIVES for Saw Mill Tramways, Log
and Lumber Trucks.

WROUGHT IRON WORK.

ATLAS ENGINES AND BOILERS.

Saw Mills, Cotton Presses, Shafting, Couplings, Pulleys, &c.

MACHINERY SUPPLIES AND REPAIRS.



JENKINS BROS.' VALVES.

Every valve tested and warranted, all parts interchangeable.

Nothing but best Steam Metal used in the manufacture.

Keyed Stuffing Box and Disc Removing Lock Nut

Used only in the Jenkins Bros.' Valves.

None are genuine unless stamped with "Trade Mark."

Should you order INSIST on having Jenkins Bros.' Valves.

71 John St., New York.

21 N. Fifth St., Philad'a.

54 Dearborn St. Chicago

105 Milk St., Boston.

CENTRIFUGAL
ROTARY AND PISTON
PUMPS.

Also HOUSE PUMPS.

PUMPS

FIRE ENGINES,
HOOK AND LADDER
TRUCKS
And HOSE CARTS.

Send for Catalogue.

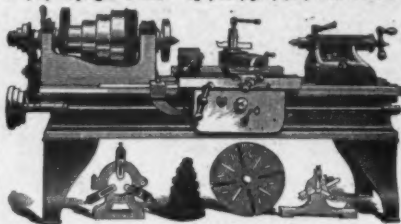
RUMSEY & CO., Limited,

Seneca Falls, N. Y., U. S. A.

SHAPERS, ENGINE LATHES AND DRILLS,

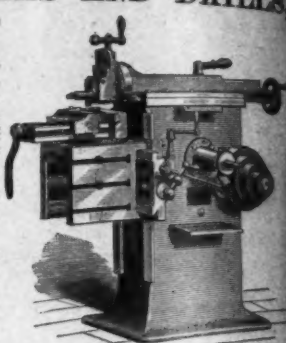
THE LODGE & DAVIS MACHINE TOOL CO., CINCINNATI, OHIO.

EASTERN HOUSE WESTERN HOUSE
64 Cortlandt St., New York 68 & 70 S. Canal St., Chicago.
Boston, Phila. St. Louis, San Francisco,
23-25 Purchase st. 19 N. 7th st. 828 N. 2d st. 12 California st.
22", 24" Upright Drills. 25", 28", 32", 40", B. G. B. F. Drills.



17", 19", 21", 24", 27", 32", 36" ENGINE LATHES.

Write for Prices. It will pay you.



15 & 20-INCH CRANK SHAPER.

Miller Safe & Iron Works,

MANUFACTURERS OF

FIRE AND BURGLAR-PROOF

SAFES.

33 Years' Record and no Failures.

23,000 NOW IN USE AND

TESTED IN OVER 300 FIRES.

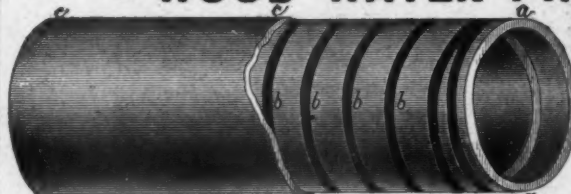
Salesroom, 24 W. Baltimore Street, Baltimore, Md.

Factory, South Baltimore.

A. WYCKOFF & SON, ELMIRA, N. Y.

MANUFACTURERS OF

WOOD WATER PIPE



Wood. Hoop-iron bands. Asphaltum coating.

FOR
Coal and Iron Mine
COKE WORKS
AND
General Water
SUPPLY.

SEND FOR
CATALOGUES AND
PRICES.

THE STANDARD TOOL COMPANY, Cleveland, Ohio.



Manufacturers of Bit Stock Drills, Straight Shank Drills, Taper Shank Drills,
Taper Reamers, Milling Cutters, Chucks, Ratchet Drills, Screw-Drivers,
Bits, Twist Drill Grinding Machines.

Use Our **No. 6 1-2 AXLE** For Trucks, Express and Delivery Wagons.
CLEVELAND AXLE MFG. CO., Cleveland, Ohio.



THADDEUS S. COBB & CO.

MANUFACTURERS' AGENTS AND DEALERS IN

MACHINERY

OF EVERY DESCRIPTION.

36 Central Street, Lowell, Mass.



Buffalo Forges

BLOWERS & EXHAUSTERS.
HEATING FURNACES, HAND BLOWERS,
AND BLACKSMITH DRILLS.

BUFFALO FORGE CO.
BUFFALO, N.Y.

Before Purchasing Elsewhere write us for Catalogue and Prices.

The KILBOURNE & JACOBS MFG. CO.

COLUMBUS, OHIO, U. S. A.

